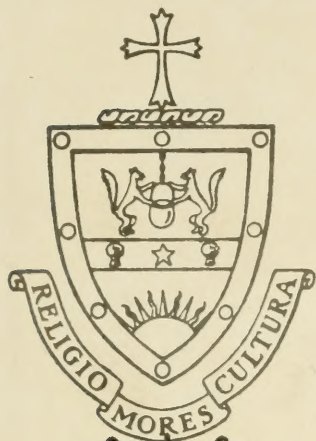




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# REPORT

OF THE

## DEPARTMENT OF MINES OF PENNSYLVANIA

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### Part I Anthracite

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1906

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HARRISBURG, PA.:  
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1907.





## LETTER OF TRANSMITTAL

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Department of Mines,  
April 1, 1907,

To His Excellency, Edwin S. Stuart, Governor of Pennsylvania:

Sir: In compliance with the Act of Assembly of April 14, 1903, I beg to submit herewith, for transmission to the General Assembly, the report of the Department of Mines for the year ending December 31, 1906. Part I covers in detail the operations in the twenty Anthracite Districts, Part II the operations in the eighteen Bituminous Districts, as returned by the Inspectors. Observations and suggestions are also offered relative to mining subjects.

Respectfully submitted,

JAMES E. RODERICK,  
Chief of Department of Mines.



# REPORT

## OF THE

# DEPARTMENT OF MINES

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### INTRODUCTION

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The coal production of the world for 1906 exceeds all previous records, and as usual the United States leads in the magnitude of its output. The estimated production of the world for the year is 1,200,000,000 tons, of which the United States produced more than 400,000,000 tons. Pennsylvania has the enviable distinction of being the greatest coal territory in the world, producing during the year 201,672,499 tons, or about one-half as much as Great Britain and five times as much as any other state in this country. In speaking of the coal industry in Pennsylvania it is difficult to avoid the use of superlatives. It is so tremendous, not only in its physical proportions, but in its commercial import, that the contemplation of it excites a most lively sense of pride in the heart of every patriotic Pennsylvanian.

A study of the values of the mineral products of the different states will afford a great surprise to most persons. It is natural to think of gold and silver as the most prominent representatives of mineral wealth, and yet the production of Colorado and California annually represents a value of only about \$100,000,000, while the coal of Pennsylvania, at points of distribution, yields a revenue approximating \$600,000,000. More than this, the market value of coal, great as it is, is not by any means its proper measure of value. Coal is the power that underlies the industrial supremacy of Pennsylvania. The countless factories and workshops, the innumerable locomotives drawing their rich burdens of commodities, the steamboats that ply in our rivers, all exist and flourish and constantly add to the prosperity and happiness of the people through the motive power furnished by the most prosaic but at the same time the most useful of minerals—coal. The prosperity of the State is assured as

long as the great demand for coal continues, for the use of coal means activity among the manufacturing and transportation interests, employment of labor and presumably profit to the employer. It is a fact, however, that the large profits are not made in the coal trade itself, but in the closely allied lines of business such as the manufacture of iron, steel and coke. As a rule the profit on coal is a moderate one.

The production in Pennsylvania would have been still greater during the year had there not been a suspension in the anthracite region during the months of April and May, and in the Clearfield district of the bituminous region during the months of April, May and June. There was also the further detriment of an inadequate car supply. Strike hindrances to the anthracite coal trade will probably be absent for the next three years, as the wage question in that region was settled in the early part of 1906 for a term of three years, by a renewal of the agreement entered into in 1903 between the operators and the miners. Under this agreement the miners have been receiving higher wages than ever before in the history of the industry. In the bituminous region peace is also assured under the agreement made in the spring of 1906 for the period of two years.



## Summary of the Work of the Department of Mines

	1898	1899	1900	1901	1902	1903	1904	1905	1906
Letters written, copied and indexed, .....	922	697	1,854	1,465	1,733	2,901	3,036	3,190	3,262
Letters received, docketed and filed, .....	1,216	972	1,342	1,600	1,924	2,328	2,649	3,023	3,218
Blanks sent to mine inspectors, .....	30,570	42,394	76,428	67,408	51,806	89,050	55,844	57,567	99,187
Letterheads and envelopes sent to mine inspectors, .....	7,200	26,188	26,750	23,200	21,750	93,000	30,000	61,600	58,550
Rules, general and special, sent to bituminous mine inspectors, .....	500	2,012	2,165	390	4,830	2,080	37	178	2,190
Mine foremen's daily record books, 30 pages each, sent to bituminous mine inspectors, .....	275	279	400	30	618	173	37	178	160
Fire bosses' daily record books, 250 pages each, sent to bituminous mine inspectors, .....	50	260	260	15	378	90	30	30	40
English mine laws in pamphlet form sent to bituminous mine inspectors, .....	522	1,830	1,735	2,303	1,987	4,052	8,115	5,933	14,298
Monthly narrative reports, 31 pages each, sent to mine inspectors, .....	.....	1,258	.....	.....	.....	11,250	40,500	75	14,215
Books for recording accidents, 400 pages each, sent to mine inspectors, .....	.....	171	455	517	.....	475	525	400	553
Reports of accidents received, copied and filed, .....	.....	18	17	17	.....	11	.....	1	6
Reports of inspections received, copied and filed, .....	.....	2,235	2,350	2,719	2,211	3,293	3,085	3,502	3,406
Daily reports of inspectors, showing duties performed and expenses incurred, copied and filed, .....	.....	3,846	3,318	3,483	2,996	5,312	5,474	4,977	5,353
Vouchers for incidental and other expenses compared and delivered to Auditor General, .....	.....	5,416	5,627	6,024	6,213	9,350	9,350	11,040	11,544
Anthracite mine laws translated into foreign languages and distributed, .....	.....	576	641	656	926	1,640	1,780	1,860	1,878
Bituminous mine laws translated into foreign languages and distributed, .....	.....	.....	.....	.....	57,250	22,325	64,700	.....	.....
Books of mine foremen's and assistant mine foremen's certificates, 300 pages each, sent to mine inspectors, .....	.....	.....	.....	.....	57,000	57,000	29,200	.....	.....
English mine laws in pamphlet form distributed, .....	.....	.....	.....	.....	.....	60	.....	.....	14
Mine inspectors' annual reports received, corrected and compiled for publication, .....	18	18	18	20	20	38,000	30	378	632
Certificates of qualification issued to mine foremen and assistant mine foremen in the anthracite region of the Department, .....	.....	.....	.....	.....	.....	30	30	30	31
Certificates of qualification issued to mine foremen and assistant mine foremen in the bituminous region after being recorded, .....	127	181	70	206	235	690	196	272	254
Certificates of qualification issued to mine foremen of first grade and mine foremen of second grade in the bituminous region after being recorded, .....	.....	.....	.....	.....	.....	768	383	264	165

## FIRST AID TO THE INJURED, EMERGENCY HOSPITALS AND RELIEF FUNDS

In most all countries where the mining of coal has reached proportions of magnitude that place it among the commodities of commerce, there has been not only a constant and commendable effort to minimize the dangers connected with the occupation, but the intelligence and ingenuity of the operator and the employe have been freely exercised in devising methods for the alleviation of distress and suffering among the victims of disaster and their families.

In Pennsylvania, the condition of the miner with respect to the daily wage, hours of labor, sanitary surroundings, protection from accident, and pecuniary relief in case of disability, is a fortunate one when compared with conditions that exist in many other states and countries. In this State we have at many collieries in the anthracite region what are known as First Aid to the Injured Corps, whose prompt and efficient service has in many cases of emergency greatly lessened the suffering of the injured workers. There are also established at the various collieries Emergency Hospitals, the beneficent character of which is being daily demonstrated. And to lighten the immediate distress of the men who are injured in the mines, and to give their families temporary financial assistance, many companies have established Relief Funds. The application of a few dollars at a period of bereavement or physical injury cannot assuage grief or materially lessen the agonizing experiences that characterize such occurrences, but it is nevertheless a comfortable feeling for a family to know that the stricken father or son will be given every attention and will be accorded the rights of a Christian burial, or, in case of injury, that the sufferer and his family will be supported for a certain length of time. The State has legislated wisely and generously in the cause of the mine worker, and numerous hospitals erected and supported by State funds attest the interest that has been taken in the welfare of this worthy class of citizens.

The bituminous region, however, has not kept pace with the anthracite region in the work of assisting the injured mine worker. No First Aid Corps or Emergency Hospitals have as yet been established at the mines, and the victims of disaster must depend upon the nearest available physician or hospital for relief and treatment.

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### FIRST AID

As the First Aid movement is one of the most modern and at the same time one of the most unique methods of rendering help in times of serious emergency, and as its popularity is daily growing more manifest, it is only proper that reference should be made to it in this report.

The first organization of the kind in Pennsylvania, and probably in the United States, was the First Aid Society organized at the Jermyrn Colliery of the Delaware and Hudson Company, in February, 1900, by Dr. M. J. Shields, a practicing physician and surgeon in the anthracite region. The society consisted of about twenty-five

men divided into squads of five men each; each squad had its captain and was provided with a small box containing first-aid appliances such as cotton, a rubber tourniquet, flexible splints, olive oil, lime water, aromatic spirits of ammonia, a small glass and a spoon. There was also a folding stretcher kept along each gangway, and each member of a first-aid squad carried a pocket first-aid packet. This plan of organization provided for one first-aid corps along each gangway and aimed to have the men so distributed that there would be one first aid student to at least every sixteen men employed in the colliery. The society as a whole met twice a month, and at each meeting Dr. Shields, or some other physician, gave a **short talk on** physiology, anatomy, or first-aid, and also supervised a drill and demonstration of first-aid methods. As a textbook the "First Aid Manual," of the Saint John's Ambulance Association, of England, was used, but Dr. Shields has since written a small pamphlet to take the place of that book.

The Delaware, Lackawanna and Western Company also began the methodical and systematic instruction of First Aid Corps in 1900, under Dr. D. H. Lake, and has carried the work to a high degree of perfection.

The Pennsylvania Coal Company and the Hillside Coal and Iron Company, of the Erie Railroad system, the Philadelphia and Reading Coal and Iron Company, and several of the other prominent companies, have organized very complete first aid corps upon the same plan adopted by Dr. Shields. In view of the importance of this work and the interest it has excited in the public mind, a complete description is given of the system adopted by the Philadelphia and Reading Coal and Iron Company, the largest of the anthracite operators. The article was prepared by an officer of that company. An article is also reprinted herewith from "Mines and Minerals," describing the competitive contests arranged by the Pennsylvania Coal Company and the Hillside Coal and Iron Company between their different First Aid Corps.

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## PHILADELPHIA AND READING COAL AND IRON COMPANY

### First Aid Corps

In 1904, for the purpose of giving prompt and more efficient assistance to the injured, the Reading Coal and Iron Company inaugurated a series of lectures on "First Aid." The lectures were delivered at Pottsville, Tremont, Mahanoy City, Shenandoah, Ashland and Shamokin. To these central points employes to the number of 2,500 were gathered, consisting of foremen, underforemen, and other employes. The work appealed to every one and deep interest was at once taken in the matter.

The first series of lectures treated of injuries commonly met with in the mines; their recognition and treatment. It included crushes, fractures, dislocations, burns, wounds, hemorrhages, artificial respiration, and the handling and transportation of patients. Demonstrations were given by the surgeon in charge on a subject.

The second series, in addition to topics treated in the previous one, took up special injuries and their dressings, and concluded with an



exhibition by an experimental corps of five men from Wadesville Colliery, who dressed all injuries likely to occur in the mines, and in addition, handled, carried and transported an injured man, and gave a demonstration of artificial respiration.

The third series was a resume of the preceding ones, together with a drill on the new dressings and an appeal for volunteers from each colliery to take up this work. The Wadesville Corps had demonstrated that young men employed in the mines could master First Aid work. From five to fifteen men from each colliery reported for instruction, the aggregate number being 350. They were given a series of drills and practical demonstrations. Each squad was required to do all the dressings and other work. They met once a week for practice, and were liberally furnished with all materials necessary for the work. The foremen were required to be present at the meetings, which were regularly held, and at stated intervals the corps were given further instruction by the surgeon. The corps of the collieries in each division now meet in competitive drill every year, and are rated by a surgeon not connected with the company. The corps in each division attaining the highest grade are presented by the management with individual medals indicative of excellence.

### Instruction to First Aid Squads

Simplicity and the avoidance of technical terms are the keynotes to the success of the work. The men have been taught the gross anatomy with the aid of charts; the circulation with charts and the heart of a bullock; the control of hemorrhages with dressings and tourniquets; the dressings of wounds and burns; to recognize dislocations and their dressing; to establish artificial respiration in cases of drowning, or of men overcome by gases heat, or electricity; to recognize, set and dress fractures of the long bones; to carry by hand, shoulder or on litter, and to transfer the patient from ground to litter and from litter to bed. They are taught to improvise dressings so that in the event of an accident happening away from a colliery they are competent to render "first aid" to any unfortunate, and to make use of material at hand. They are forbidden to continue in charge of a case after the patient has been delivered at his home and a surgeon secured.

The corps are taught the recognition of shock and the institution of prompt treatment, by checking of hemorrhages, the application of hot water bottles, blankets, and when able to swallow hot coffee or diluted aromatic spirits of ammonia. To treat sunstroke or heat prostration from any cause, freezing and frost bite, the removal of foreign bodies from the eyes, ear, nose and throat; convulsions, accidents from electricity, the rescue, resuscitation, and artificial respiration in cases of drowning, or of men overcome by gases, heat or electricity. The handling of patients by one, two, three or four bearers, with and without the litter, and the transfer to and from the litter or to the ambulance or bed.

### The New Dressing Case

With the organization of First Aid Squads at every colliery, the question of the equipment of hospitals, as required by law, was



considered. To that equipment was added an additional case, fitted up to meet any requirement. As the dressings are kept in the mines, it was found imperative to have each dressing packed separately and so enclosed as to protect it from dampness, gases, dust, etc. The First Aid packet of the army was taken as a basis. It contains two gauze compresses, a gauze bandage, a triangular bandage and two safety pins. The packet is designated P. & R. C. & I. Packet "C," and is used for all small wounds.

The large wound packet consists of the contents of packet "C" with the addition of two square yards of gauze, and is designated P. & R. C. & I. Packet "B." The burn dressings packet contains six pieces of picric acid gauze 18x18 inches and is known as P. & R. C. & I. Packet "A." Each constituent of all packets is enclosed in wax paper and so arranged as to allow their handling by men with soiled hands without danger of contaminating the dressing. Each packet is enclosed in heavy rubber cloth hermetically sealed, after the contents have been sterilized. Six of each of the packets, eighteen assorted cotton and six gauze bandages covered and sealed, four quarter pounds of absorbent cotton, three web tourniquets, pins and safety pins, and a roll of adhesive plaster constitute the P. & R. C. & I. case. Each squad is furnished with copies of the Hospital Corps Drill Regulation of the United States Army.

### Splints—Litters—Ambulance

The splints for the leg are three and five feet long, and for the arm are eighteen inches. The litter is a modification of the army litter, and has been made to suit the mine requirements. It is covered with heavy brown canvas and weighs 22 pounds. The spreader irons and stirrups or feet are of wrought iron.

Each colliery is provided with an ambulance. The top and sides are of wood; front and back are movable windows for ventilation. It is furnished with two spring litters, covered with rubber cloth, and a portable stove.

### Tourniquets

The tourniquets are of the U. S. A. field pattern, and are made of a strap webbing with a three tongued brass buckle with compress block covered with chamois skin. The Esmarch triangular bandage is illustrated. The men are taught to apply it as a dressing to all parts of the body, limbs and head, as well as its use as a sling.

### Rules for the Removal of Clothing

The few simple rules for the removal of clothing and dressing of wounds are as follows: When a man is seriously injured do not remove his clothing in the ordinary way; cut it off. Do not remove any more clothing than is necessary to examine and dress the injury. Cover up every injured man with blankets regardless of the weather; if he is cold fill bottles with hot water and place them on and about him, but always have clothing or a layer of woolen blankets between his body and the bottles.

### Dressing of Wounds

Remember there is usually more than one wound. Never attempt to cleanse a wound. Do not remove blood clots. Do not handle the

part of dressing that will be in contact with a wound. Cover up quickly every wound with clean gauze and fasten with a bandage. Whether a wounded or injured arm or leg be broken or not, always splint. Do not use antiseptic lotions, salves, balsams, oils, cobwebs or tobacco in any wound; sterile gauze only should be used. Select the man you need to assist and order the others away. The corps are taught to control hemorrhages by dressings, duplicated if necessary, and the application of tourniquet. Also by digital pressure along the line of the vessel, if no dressings are at hand; to recognize a broken bone and put it in place, and fix it there with splints and bandage. The subject of compound fracture of the leg, especially frequent in mine, railroad and machinery accidents, is dwelt upon with much emphasis, as to fix in the mind of each man the seriousness of the case and his responsibility for the first dressing. To diagnose a dislocation, but not to attempt to reduce any of them except of the fingers.

### The Dressing of Burns

All burns are to be covered with picric acid gauze; that with cotton and bandages. The gauze is aseptic, antiseptic and a local anaesthetic. In severe cases attended with profound shock, the primary dressing can be left undisturbed for 48 hours without detriment and in many instances much to the safety and comfort of the patient.

### Rules for the Dressing of Burns

Cut off the clothing.

Do not break blisters.

Cover with several layers of picric acid gauze, and with cotton and bandages.

Slit gauze for eyes, nose and mouth.

In applying cotton, do not cover mouth or nostrils.

Apply gauze so as to separate fingers.

### Stimulants

The administration of whiskey to injured people is prohibited unless ordered by a physician. Under the Reading system one or more of the First Aid men accompany the patient to his destination. When stimulation is necessary, they give hot black coffee and aromatic spirits of ammonia; this with blankets, hot water bottles and ambulance stoves, is all a non-professional man can do, and in most cases all that is necessary.

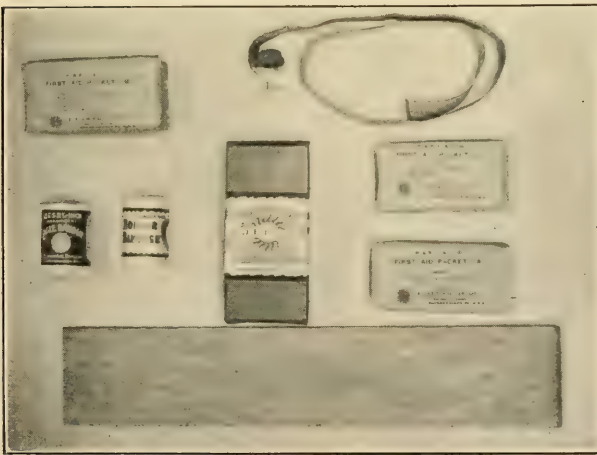
### The Result

That the First Aid work is appreciated by the injured is evidenced by their warm commendation of the character of the dressings and their application, and the careful handling and transportation from the scene of the accident to the hospital.

Last winter during a clinic given at the Pottsville Hospital by one of the country's most celebrated surgeons to the members of the Schuylkill County Medical Society, a case came in from Silver Creek Colliery. The assembled medical men were invited to the



*The Reading C.&I. Co.———  
———Dressings @se*



*The———  
Constituents of @se.*









*Improvised Dressings  
—— Fractured Forearm*



*Dressing for fracture of leg  
or thigh — Showing the  
Reading Litter.——*

*Carrying down a  
—flight of steps.*



*Crossing an Obstruction.*









*Improvised Litter,  
Two laggins and blanket.*



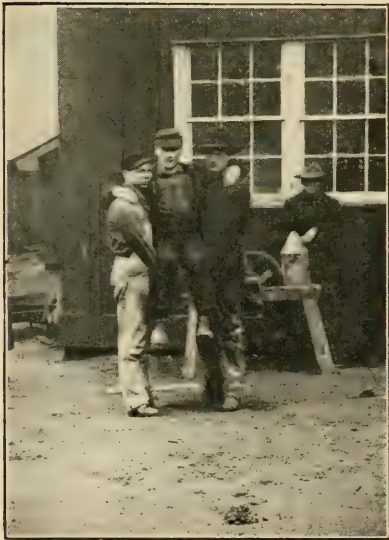
*Transportation on  
—— Mule Back*



*Assisting a ———  
——— Man to Walk*



*Carrying over ———  
——— Shoulder*



*Hand Seat.*



*Hand Seat with  
Legs Supported.*





receiving ward to examine the dressings. The First Aid men were asked to explain the injury and their dressing. It was said be a fracture involving the knee joint and a fracture of the knee cap. The limb was plinted posteriorly with the buttocks, the posterior knee space, the ankle and heel well padded. The limb was secured to the splint, and a figure-of-eight bandage was applied to the knee cap. The patient was questioned as to the comfort of the dressing, and answered that he had slept part of the distance in the ambulance. The colliery is about eight miles from Pottsville. The distinguished surgeon said to the medical men present, "That dressing should not be touched until photographed." At a subsequent meeting of the Schuylkill County Medical Society, the work of the First Aid Corps was warmly commended, and the statenrent made by all members present that the cases came to them in far better condition than ever before. It is said the annual reports of the Presidents of the Boards of Managers of the Hospitals in this region comment favorably on this work, and the surgeons in charge of the hospitals give it hearty endorsement.

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## PENNSYLVANIA COAL COMPANY AND HILLSDALE COAL AND IRON COMPANY

### First Aid Corps

"The men composing the first aid corps are chosen at each colliery from the general membership of the First Aid Association for that district. Each of these associations has its own officers of administration, consisting of a president and a secretary, who administer its affairs under the general direction of the company. The captains are chosen by the team, and all of the men in the society wear a Red Cross button. The organization is thus seen to be well adapted to arouse friendly rivalry in the several districts and to form an excellent basis for such competitive contests as will be described later. The corps drill at the colliery both under the direction of Dr. Shields or a local physician, and also under the general oversight of the local superintendent of the coal company, time being allowed them during working hours for such drill.

In order to arouse interest a series of competitive contests was arranged. Preliminary contests were held in each district, and the winning team in each district met the winners from the other districts in competitive contest in the Armory of the Thirteenth Regiment, at Scranton, Saturday, November 24, 1906. This contest, so far as we know, was the first competitive public exhibition between first-aid corps held in connection with American coal mining. Much interest was evinced in the contest and there were a large number of spectators not only from Scranton and vicinity, but some from a distance. The entire day, from 9:30 A. M. to 4 P. M., was spent in watching the operations of the several teams.

Each team consisted of the captain, four men, and one subject upon whom the demonstration was made. Some of the teams had provided themselves with white duck uniforms, similar to those worn by a staff in attendance at a hospital, but most of them wore the ordinary street clothes. In the individual contests the operator was chosen by the captain or by the team.

The following events were contested, it being understood in each case that method and skill were to be given at least equal value with speed.

First Event: The subject, supposed to be insensible from the effects of gas and totally helpless, was laid on a blanket. One man then picked him up and carried him 50 feet, laid him down and performed artificial respiration for 1 minute. The methods of lifting, carrying, and producing artificial respiration were not prescribed, and the contestants were allowed to choose their own methods. There was considerable divergence shown by the different operators in the methods of carrying, and in the method of holding the tongue out of the mouth during artificial respiration. This seemed to be the most difficult part of the operation and the one least successfully carried on. The first prize was awarded to John Barrett, Team No. 4, time 2 minutes 26 1-5 seconds; the second to Frank Doran, Team No. 7, time 2 minutes 44 3-5 seconds, and the third to Samuel Harrison, Team No. 1, time 3 minutes 37 2-5 seconds.

The times of the other teams were as follows: No. 2, 2 minutes 38 seconds; No. 3, 2 minutes 32 4-5 seconds; No. 5, 4 minutes 9 seconds; No. 6, 2 minutes 37 seconds; No. 8, 2 minutes 52 2-5 seconds.

Second Event: The subject, supposed to be injured in the lower part of the body, was to be carried 50 feet by two men who would form a four-handed seat. The first prize was awarded to Team No. 7, time 25 seconds; the second prize to Team No. 2, time 52 3-5 seconds, and the third prize to Team No. 1, time 36 seconds. The times of the other teams were as follows: No. 3, 42 seconds; No. 4, 37 seconds; No. 5, 37 seconds; No. 6, 36 seconds; No. 8, 34 seconds.

Third Event: The subject was supposed to have a broken leg and three men were to make a temporary stretcher of two coats and two poles, place the man on the stretcher and carry him 50 feet. This test gave opportunity for considerable variation in the methods of handling the subject and placing him on the stretcher. The contest was won by Team No. 4, time 2 minutes and 43 seconds; second prize, Team No. 7, time 2 minutes 44 seconds; third prize, Team No. 6, time 3 minutes 53 seconds. The times of the other teams were as follows: No. 2, 4 minutes 18 seconds; No. 3, 3 minutes 55 seconds; No. 5, 4 minutes 5 seconds; No. 8, 4 minutes, 14 seconds.

Fourth Event: The subject was supposed to be wounded in the right temple. This wound was to be dressed by one man with the appliances found in a first-aid packet to be opened and the wound dressed. First prize, Team No. 5, time 1 minute 42 seconds; second prize, Team No. 6, time 3 minutes 24 seconds; third prize, Team No. 1, time 3 minutes 58 seconds. The times of the other teams were as follows: No. 2, 4 minutes 37 seconds; No. 3, 3 minutes 46 seconds; No. 4, 3 minutes 5 seconds; No. 7, 2 minutes 33 seconds; No. 8, 3 minutes 4 seconds.

As will be seen by comparing the times of the teams securing second and third prizes, the time element was naturally not considered of nearly the same importance as the skill and no other of the contests probably showed the results of the training better than this, since the binding of a wound requires deftness and practice.

Between the fourth and fifth contests luncheon was served in the armory by the coal companies to all of the first-aid men and the guests.

The contests in the afternoon were between the teams as a whole and probably formed the most interesting features of the whole day.

Event 5-A: The subject was supposed to have a broken leg and a broken arm and to be unconscious, the exact location of the wounds being designated by the judges. The contestants were to perform artificial respiration, dress the wounds, stop the hemorrhage, apply temporary splints to the fracture, place the patient on a stretcher and carry him 50 feet or more over a loaded mine car and a fence and place the stretcher in an ambulance.

Event 5-B: This was the same as Event 5-A excepting that a canopy was placed over the mine car to represent the roof, and the available headroom thus restricted; the injured man was not placed in an ambulance. No prize was given for 5-A, but 5-A and 5-B were combined in the award for prizes. The first prize for the contest was awarded Team No. 2, the time being 3 minutes 47 seconds; the second prize was given to Team No. 8, time 7 minutes 2 seconds, and the third to Team No. 7, time 3 minutes 33 seconds. The times of the other teams in the Event 5-B were as follows: No. 1, 5 minutes 25 seconds; No. 3, 4 minutes 33 3-5 seconds; No. 4, 4 minutes 57 seconds; No. 5, 4 minutes 44 seconds; No. 6, 4 minutes 31 seconds.

The following regulations were made for the judges in determining the contest:

1. The captains of the team are to draw from a hat ballots which are to be numbered from one to eight, and the teams will contest in that order, i. e., the team drawing No. 1 will be the first to contest, and so on. Teams will make three successive trials.

2. A secretary and two time keepers shall be selected on the grounds. Dr. Shields will act as announcer.

3. The secretary in keeping his records shall designate the team performing by their number and also the place where they are from.

4. The judges shall be handed slips of paper with the number and name of team at the beginning of each team contest, so they can keep notes, and they shall also have slips with number, name of team, and name of man or men taking part in 1, 2 and 3 men contests.

5. The judges shall arrange a program from the circular which will be announced as a whole before the contest begins, and it will also again be announced plainly and distinctly as each team comes up for trial. The judges shall also mark the injuries in each contest.

6. No practicing on the day of the contest will be allowed.

7. Each team shall have the same trial and shall use the stretcher furnished on the day of the contest.

8. Each team captain shall select men from his team for the 1, 2 and 3 men contests. There will be nothing against his selecting himself as one of the contestants.

9. It will be announced that time or speed is not the first or most important consideration.

10. It should also be announced that the several methods of one man carrying another man can be used, but should the patient or subject assist by using his own strength to rise up or help the man carrying him the trial shall be disbarred. Also, that the difference in stretcher drill shall not militate against the team.

11. The first-aid packet is to be used in open wounds and stopping hemorrhages.

12. The following obstructions will be used: (a) A loaded mine car; (b) an ordinary fence.

The contest as a whole was most interesting and instructive and it probably marks a new era in systematic first-aid practice about the anthracite mines.

It is very generally recognized that serious effects frequently follow mining accidents in the form of blood poisoning or loss of blood (which result in tardy recovery, or even permanent disability) owing to the filthy condition in which the surgeon frequently finds the wounds and injuries and to the length of time that must elapse between the occurrence of the accident and the time when the doctor reaches the patient. This condition is unavoidable, for these accidents occur usually underground and frequently several miles even from the mine opening. Moreover, the surroundings are of necessity dirty. The clothes and hands of the workmen are badly soiled, and no matter how careful his fellowworkmen may be, an injury which may be slight at first may be greatly increased through unskilful handling. In view of the fact that these unfavorable conditions must necessarily exist, and in view of the demonstrated efficiency of first-aid treatment by men in the mine, it is fair to assume that before long the movement for first-aid treatment will not only have extended throughout the anthracite field but through the other mining regions of the country as well."

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## EMERGENCY HOSPITALS

In the anthracite region the establishment of Emergency Hospitals was made compulsory by the act of 1901, and therefore immediately after the passage of the act the operators proceeded to provide these beneficent institutions at the most convenient places in the mines, and equipped them with all the practical aids and accessories, such as stretchers, reclining chairs, tables, and in many cases hot and cold running water and telephones. Where practicable many of them are heated with steam and lighted with electricity. They are well ventilated, and in many instances the walls are white-washed and the floors cemented. The foremen and assistants are generally held responsible for the condition of the hospitals, and periodically they are inspected by the company physician. Nearly all the companies have established hospitals, and as a consequence



hundreds of them are now in existence in the anthracite region. These hospitals, supplemented by the well drilled First Aid Corps, do a remarkable work in alleviating suffering and saving human life. Ambulances for use in connection with the work of relief are stationed at the various collieries throughout the region and are ready for instant service. In cold weather they are supplied with blankets and stimulants and are heated.

A novelty in the way of a hospital car is in use by the Lehigh Valley Coal Company. The car was constructed at the suggestion and under the direction of one of the mine inspectors. Briefly, it may be described as follows: The truck is made in the ordinary way and the frame work supplied with springs upon which is constructed a platform. On the platform rest two upholstered cots, provided with side and center boards also upholstered, and four seats for the attendants or first aid corps. The car is supplied with clean woolen and rubber blankets, an emergency case containing all requirements, also heaters. In this way the patient is made as comfortable as possible. The car is kept in a dry place at convenient points, and in case of accident is rushed to the chamber or place where the accident occurred, the victim is placed on it and temporarily treated and made comfortable, until he arrives at the mine hospital, where the first aid corps properly dress his wounds, and set his limbs, if broken. During the entire time he is never moved from his bed until the State Hospital is reached, or his own home. The car is made to accommodate two patients and four attendants. It can be used to advantage in small veins, where men cannot stand erect to carry a stretcher. A photograph is given herewith.

Another hospital car of great utility is that of the Delaware, Lackawanna and Western Company. The car contains six stationary beds and four coach seats, a commodious medical and surgical cabinet containing all necessary remedial agents and surgical appliances for emergency work, hot and cold water, stretchers, blankets, etc. A toilet room is also provided and the car is heated by steam.

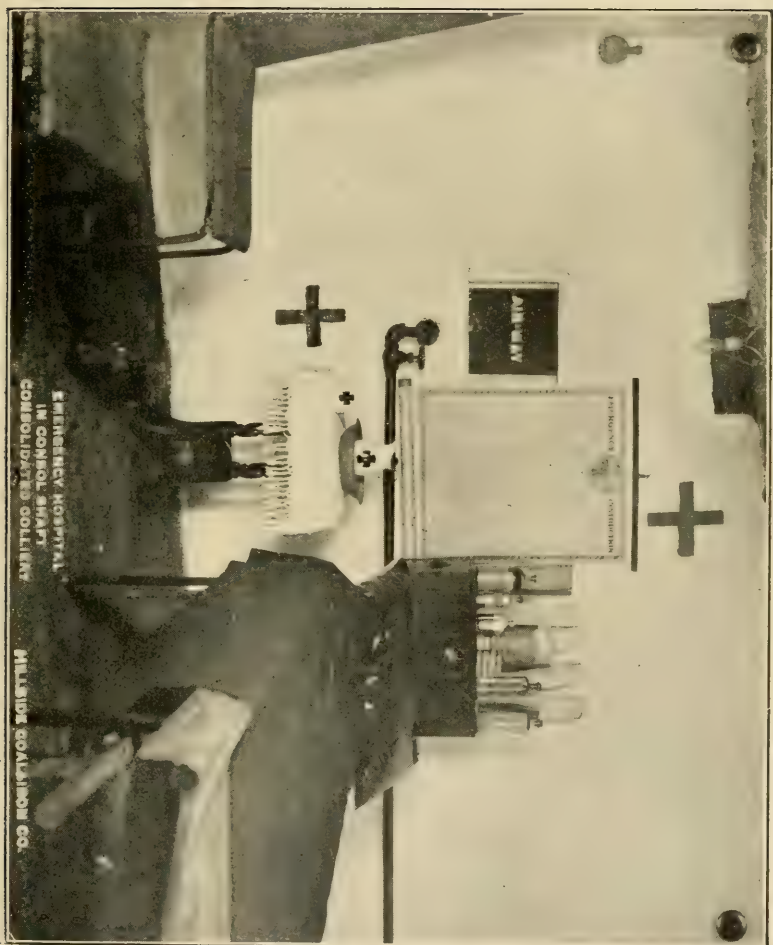
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## RELIEF FUNDS

The practice of giving financial assistance to the mine workers and their families in case of accident has constantly grown in favor, and at most collieries in both regions there is now some organized system of relief. The methods vary greatly, but in most cases the work is mutual, the operators and employes both contributing to the fund. At some collieries the employes have organizations of their own.

The most noted system in the State is that known as the Carnegie Relief Fund, a fund having its origin in the generosity of Mr. Andrew Carnegie. It is intended to provide for the employes of the Carnegie Company, in all its works, mines, railways, shops, etc., injured in its service, and for those dependent upon such employes as are killed. This fund has the further purpose of providing small pensions or aids to employes of long and creditable service who may need it in their old age. In making this munificent gift, Mr. Carnegie said, "I make this first use of surplus wealth upon re-



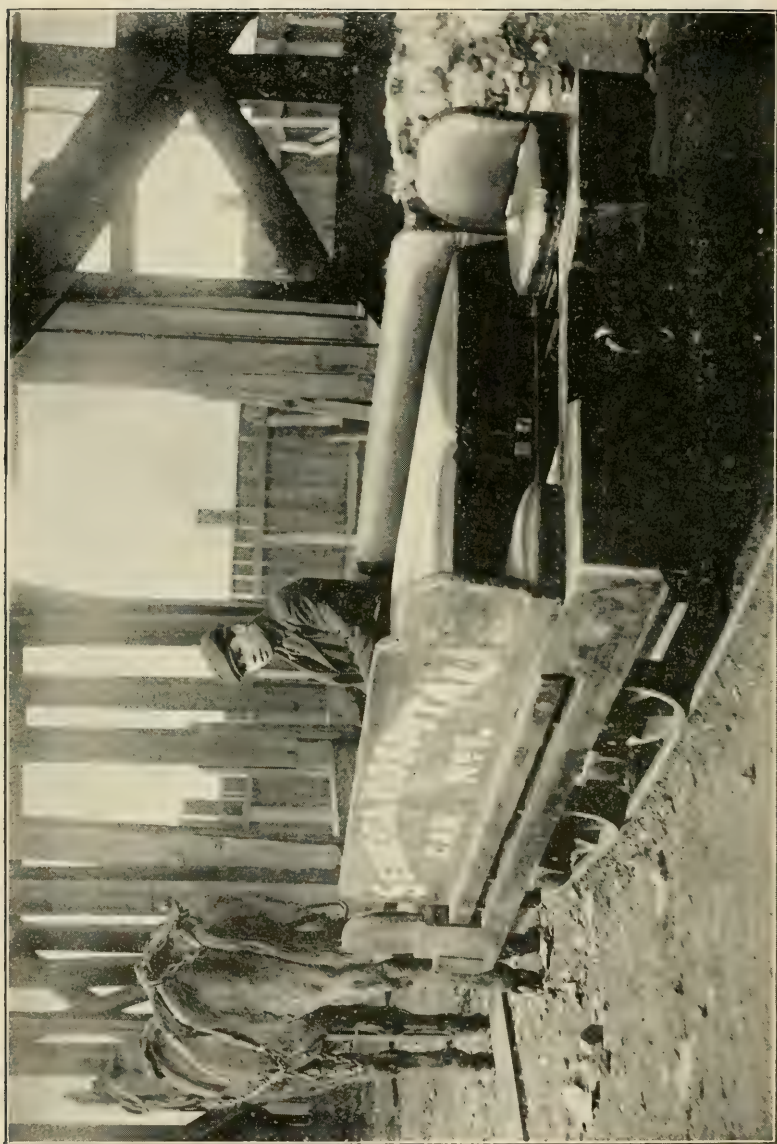


EMERGENCY HOSPITAL  
IN COAL SHAFT  
CONSOLIDATED COLELIENT

MELBIDE COALMINING CO.









tiring from business as an acknowledgment of the deep debt I owe to the workmen who have contributed so greatly to my success." The benefits to employes disabled in service are 75 cents a day for unmarried men, and \$1.00 a day for married men, under the Carnegie plan; but in no case shall the benefits exceed the average daily wages of the employes. The death benefits are \$500 to the widow of deceased, and \$100 additional for each child under sixteen years of age. The regulations governing this fund were very carefully and intelligently prepared and the kindly intent of the founder of the fund is being satisfactorily carried out.

Of the different systems of relief in vogue, the strictly mutual system seems to be the most popular, and is probably the most equitable. In the bituminous region there are numerous companies that look after the welfare of their employes and join with them in providing funds for relief in case of disability or death. For the information of those interested we reprint herewith the rules governing the accident and death association of the employes of the Pittsburg Coal Company. These rules show clearly and fully the good work being done by that company. Many other companies have similar organizations.

In the anthracite region the Philadelphia and Reading Coal and Iron Company, Lehigh Coal and Navigation Company, and the Susquehanna Coal Company have for many years given financial aid to their employes in time of physical disaster. The Reading Company organized its relief fund in 1877. Under the rules governing it the employes contribute from 15 to 50 cents per month, according to wages. In case of accident injured persons who have contributed 30 to 50 cents a month, receive \$5 per week; those who have contributed 15 cents a month, receive \$2 per week. No payment extends over a period of six months. If death results from injury the heirs of those who have paid 30 to 50 cents into the fund, receive \$30 in cash and \$7 per week for one year; and the heirs of those who have paid 15 cents a month into the fund receive \$30 cash and \$2.80 per week for one year. The original endowment of \$20,000 contributed by the company is invested in bonds bearing 7½ per cent. interest, and the interest is paid over to the fund regularly. The company bears all expenses connected with the management of the fund.

The Lehigh Coal and Navigation Company established a fund in 1884. The company pays into the fund one cent for every ton of coal produced at its mines. Inside workmen pay into fund one per cent. of their earnings and outside workmen pay one-half of one per cent.; no one pays more than one dollar in any one month. In case of accident causing disability that lasts more than one week, the person injured receives a sum equal to one-half the weekly wages of the class of workmen to which he belongs, for each week during the period of disability, but not for a longer period than six months for any one accident. In case accident results in death, \$30 is paid for funeral expenses, and a sum equal to one-half the weekly wages, as in the case of injury, is paid the heirs for one year from date of accident.

# PITTSBURG COAL COMPANY

## BY-LAWS

TO GOVERN BRANCHES OF THE COMPANY EMPLOYEES' ACCIDENT  
AND DEATH ASSOCIATION

### NAME

This Association is to be known as ..... Mine Branch  
of the Pittsburg Coal Company Employees' Accident and Death Association.

### OBJECT

The purpose of this Association shall be the creation of a fund for the payment of benefits in cases of disability or death resulting from injuries received while at work for the Pittsburg Coal Company or in going to or in coming from such occupation. Also for relief in cases of death of members from natural causes and in all cases of death occurring in the families of members, as hereinafter provided; also for the creation of a fund to provide pensions for members who shall be incapacitated through old age, accident or disease, from earning their own living.

### ARTICLE I

#### Membership

Every employe of the Pittsburg Coal Company working in or about ..... Mine, shall be constituted a member of this Association, and the dues of the Association shall be regularly deducted from his pay by the Pittsburg Coal Company and credited up to the fund of this Branch.

Any member leaving or being discharged from the employ of the Pittsburg Coal Company shall cease to be a member of this Association on that day; shall forfeit to it all sums of money paid by him as dues, and shall have no further claim on the Association.

### ARTICLE II

#### Meetings

The annual meeting for the election of officers for this Branch shall be held on the second Monday of December each year.

### ARTICLE III

#### Officers

The officers of this Branch shall be a President, Vice President and Secretary. Also an Executive Committee of five members, of which the President, Vice-President and Secretary shall be constituted members ex-officio. These officers shall be elected at the annual meeting in December and shall enter upon their duties the first day of January following, and shall serve until their successors are duly elected and installed.

### ARTICLE IV

Section 1. The duties of the President shall be to preside at all meetings of this Branch and of the Executive Committee; to appoint all committees, not otherwise provided for, sign all warrants drawn on the Treasurer of the Association for the disabilities hereinafter provided for. He shall call special meetings at the request of eight members, and, when, in his judgment, the interests of the branch require it.

Section 2. The Vice-President shall perform all the duties of the President in his absence or inability to act.

Section 3. The duties of the Secretary shall be to keep correct minutes of the meetings, attest all orders on the Treasurer, and keep a faithful account with each member and a general account with the Association for all warrants drawn

upon the Treasurer and payments for accidents and deaths duly authorized to be paid. He shall post an itemized report at the end of each month, showing the amount of money received during the previous thirty days, the amount paid to each particular recipient of benefits and the nature of injury suffered by each; also the total amount in the treasury at the time the report is posted. At the end of each year he shall make and post a report showing the total amounts received and expended during the year. At the expiration of his term of office, he shall deliver to his successor all books, papers, etc., belonging to the Association.

Section 4. The Treasurer of the Pittsburgh Coal Company Employees' Accident and Death Association shall receive all dues paid by the members of this Branch and receipt immediately to the Secretary for the same. He shall pay no money without an order signed by the President and attested by the Secretary of this Branch. He shall keep a correct account of all moneys received and paid out, and shall render an account yearly to this Branch. He shall give a Fidelity bond covering the handling of funds intrusted to his care in an amount to be satisfactory to the members of this Branch.

## ARTICLE V

Section 1. It shall be the duty of the Executive Committee to meet once each two weeks, and oftener if necessary. They shall investigate all claims against the Association and decide upon and direct all warrants that are to be drawn on the Treasurer and transact all urgent business brought before them between regular meetings. They shall have power to settle all business relative to relief benefits, as hereinafter provided for.

Sec. 2. It shall be the duty of the Executive Committee to purchase all necessary stationery, such as books, paper, blanks, pens, etc.

Sec. 3. Should the Executive Committee have any doubt of the disability of any member claiming benefits from this Association, they may request such disabled member to produce a doctor's certificate sworn to before a Justice of the Peace or Notary Public.

Sec. 4. Any member living three miles or more from place of meeting, will be considered outside of visiting limits.

Sec. 5. Disabled members living beyond the visiting limits of this Branch shall on applying for benefits, produce a doctor's certificate sworn to before a Justice of the Peace or Notary Public; but not more than two weeks' benefits will be paid on any one certificate, except in case of a three weeks' pay, when three weeks' benefits will be paid on one certificate.

Sec. 6. It shall be the duty of the Executive Committee at the death of a member, having no relatives to claim him, to arrange for his burial and pay all expenses out of his death benefits. Should there be any money remaining, they shall return it immediately to the Secretary, who, after notifying the same, shall turn it over to the Treasurer.

In cases where there are relatives, the duty of seeing that the member is decently and properly buried and all the legitimate funeral expenses are liquidated, shall devolve upon the Executive Committee.

The Secretary of the Executive Committee shall receive a remuneration of \$1.50 for each regular meeting attended, the balance of the Committee shall receive \$1 for each regular meeting attended. Any member of the Committee being absent from a regular meeting without a reasonable excuse shall be fined 25 cents.

## ARTICLE VI

### Dues and Relief

Section 1. Dues of 40 cents per month for each full member and 20 cents per month for each half member, under sixteen years of age, payable semi-monthly, will be collected by the Pittsburgh Coal Company from the wages of such members and paid into the fund of this Branch, for disbursement, as hereinafter provided.

Each fund to have the power to raise dues when necessary to meet a deficiency.

All members under 16 years of age shall be constituted half members; but it shall be obligatory that all employees of sixteen years and over shall be constituted full members, paying full dues and receiving full benefits.

Sec. 2. In case of the death of a member, resulting from accident while in the performance of his duties as an employee of the Pittsburgh Coal Company, or in coming to or going from his work, the benefits payable to his widow, or legal heirs, shall be \$150, of which amount the Pittsburgh Coal Company will pay \$75.

Sec. 3. In case of the death of a member from any other cause the benefits payable to his wife, or other legal heirs, shall be \$100, payable entirely from the funds of this Branch.

Sec. 4. In the case of a non-fatal accident to a member of this Association, he shall be entitled to receive \$5 per week from the funds of this Branch, and



such sum per week as may be added by the Pittsburgh Coal Company in accord with paragraph printed below, namely:

1st. To give one-half instead of one-third in fatal accidents, the total amount not to be changed.

2nd. To grade the non-fatal accidents; the Pittsburgh Coal Company to give \$5 in addition to the Fund's \$5 in very serious cases; \$2.50 in addition to the Fund's \$5 for less serious cases, and nothing in the minor cases.

3rd. The Company's surgeon to decide in all cases in which grade the beneficiary belongs.

Provided, however, that if, in the judgment of the Executive Committee, the member is physically able to return to work within the period of one month, he shall not be entitled to receive benefits for the first week following such injury.

That in no case will a member be entitled to benefits in all cases of sprains, unless external appearances would present itself to the satisfaction of a physician, also that the sprain was received while following his daily occupation, and not due to a weak condition of the body.

Sec. 5. Weekly benefits will be paid for a term of twenty-eight weeks, and should death occur traceable to the accident for which he receives these benefits, within three months of the termination of this period, the death benefits will be paid to his legal heirs.

Sec. 6. Weekly benefits shall cover all expenses connected with the accident for which same are paid, including the bills of doctor and hospital.

#### Provisions Relating to Total Disability

In all cases where the Executive Committee and Company's surgeon shall be satisfied that a total disability exists, a total of twenty-eight (28) weeks' benefits shall be due the beneficiary less amount already paid him. Where total disability exists the Committee and Company's surgeon may make provisions for an artificial limb or limbs as the case may be. The Fund of the Branch to which the beneficiary belongs and the Pittsburgh Coal Company to defray the cost of same in the proportion as provided in section relating to accident pay.

Sec. 7. In case of the death of a member's wife from any cause, the sum of \$75 shall be paid to the legal heirs. Provided, however, that said wife was, at the time of her death, residing in Pennsylvania or Ohio.

But in the case of the death of a member's wife and he not living with her or supporting her, then no benefits shall be paid to this member. The deceased wife, however, shall be given a decent burial.

Any member living with his mother, the same being a widow, or his sister or daughter, they being single and over 16 years of age, and acting in the capacity of housekeeper, shall receive the same benefits as wife.

Sec. 8. The benefits payable to half members, or their families, shall be one-half of the benefits payable to full members under like conditions; that is, \$75 in case of death from accident, and \$2.50 per week in case of non-fatal accident, as hereinbefore provided. The Pittsburgh Coal Company in such case paying pro rata as provided in Sections relating to death and accident benefits.

Sec. 9. When a member supports his father or mother, or his wife's father or mother, or either of them, he shall in the event of their death, receive \$50. Provided that said dependent relative or relatives reside with applicant in Pennsylvania or Ohio at time of demise and have so resided for at least three years previously.

Sec. 10. In case of the death of a member's child over one year of age and under five, the sum of \$10 shall be paid, and over five years of age and under 16 years of age \$25 shall be paid to said member. Provided, however, said child was, at the time of its death, residing in the State of Pennsylvania or Ohio.

#### ARTICLE VII

When a member is killed or disabled in rescue work where life or property is at stake, at or in any of the mines of the Pittsburgh Coal Company other than the one in which he is regularly employed, his benefits shall be paid by the Branch of which he is a member.

#### ARTICLE VIII

On the day that death by accident occurs in a mine, the miners may cease work, but under no circumstances, shall a mine be laid idle for any funeral; this, however, is not to prevent individuals from attending a funeral.

#### ARTICLE IX

Section 1. Every employe's dues shall be deducted as soon as earned, and he shall be entitled to benefits from the time such dues are deducted. No initiation fees shall be charged.

Sec. 2. It shall be the duty of every member receiving an injury to report the same to Mine Boss or Weigh Boss and any of the Executive Committee on day that accident occurs and receive a personal injury blank which must be properly filled under penalty of forfeiting accident pay.

When an injured person is moved to his home in an ambulance, it shall be the duty of the Executive Committee to see that a personal injury blank is properly filled out.

Sec. 3. No dues shall be required of members while they are receiving benefits.

#### ARTICLE X

Any member while receiving benefits from the fund, shall not be permitted to follow any kind of employment, neither shall he be allowed to go beyond three miles from his residence, without permission from the committee and doctor. Any member violating this rule, or being intoxicated or visiting taverns or being from home sooner in the morning than six o'clock in the summer or seven in the winter, or later in the evening than seven in the winter and eight in the summer, shall for the first offense forfeit one week's allowance; for the second, two weeks' allowance; and for the third, shall be suspended from all benefits for one month, and for any further offense shall forfeit all claims for such accident.

The summer term for injured members shall begin on the 31st of March and end on the 30th day of September; the winter term shall commence on the 1st day of October and shall end on the 30th day of March.

#### ARTICLE XI

Should any member receiving benefits go beyond the three-mile limit, without receiving permission from the proper authorities, and die there, no death benefits will be paid.

#### ARTICLE XII

Section 1. Any member of this Branch, who has worked in or around any of the Pittsburgh Coal Company's mines for a period of five years, consecutively, dating from the adoption of these by-laws, and is compelled to cease work through permanent sickness or old age, may, if he so desires, purchase for himself a death benefit of \$75 by paying the sum of \$3 per annum to the Secretary of this Branch; payments to be made as follows: \$1 on or before the first day of January; \$1 on or before the first day of May; \$1 on or before the first day of September, each year.

Sec. 2. Any member of this Branch falling sick from any cause may keep in good standing for death benefits by notifying the Secretary of this Branch of his condition at the end of each month, and after the expiration of three months shall keep in good standing in accordance with the provisions of Article 12.

#### ARTICLE XIII

In order to be eligible to a place on the pension list, any member of this Association leaving the mine at which he has been working for another mine of the Pittsburgh Coal Company, must apply to the Secretary of the Branch of which he is a member for a transfer card, which will be furnished by the Secretary, who must be notified at least 24 hours in advance of the time the member intends leaving his old working place.

This card must be presented at once to the Secretary of the Branch at the mine where he is to work, and when so presented to him the Secretary will make a record of same in his books and forward the transfer card to the Treasurer of the Association at Pittsburg.

Any member failing to comply with Article 13 shall come under and be governed by Article 1 of these By-Laws.

#### ARTICLE XIV

At the annual meeting of the Branch for the election of officers a full statement of the condition of the affairs of the Branch for the past year shall be presented, and there the accounts of said Branch shall be submitted to a committee of five members, the majority of which are to be appointed by the President, and the minority by the Vice-President, to audit the books and vouchers, and said auditing committee shall have the power to send for persons or papers, and shall report in writing at the first meeting of the Executive Committee thereafter. The books shall be audited once a year, oftener if necessary, the sum of 75 cents being paid to each auditor.

#### ARTICLE XV

Any fraud or attempted fraud on the Association perpetrated or attempted to be perpetrated, by any member, shall be followed by expulsion from the Order and from the mine and forfeiture of the dues already paid.



## ARTICLE XVI

## Pension Fund

The Pittsburgh Coal Company having expressed a willingness to join with the employes in the creation of a pension Fund for the paying of benefits to its employes who, through old age, accident, or sickness, are permanently unfitted to earn a living, and the said company having submitted the following conditions under which it will join the creation, maintenance and disbursement of such a Pension Fund, this Association hereby ratifies the said conditions and binds itself to observe the same.

Out of the monthly payments of dues, full members and half members alike, 2 cents per member per month shall be paid by the Treasurer of the Association to ..... Trust Company, Trustees. To these payments of 2 cents per member per month into the Pension Fund, the Pittsburgh Coal Company will add 1 cent per member per month, thereby providing monthly payments into the Pension Fund of 3 cents for each member.

The Pittsburgh Coal Company will, in addition to its contribution of 1 cent per member per month, pay to the said ..... Trust Company, Trustees, the sum of \$10,000 to start the said Pension Fund, with the understanding and proviso that the \$10,000 so contributed, and the payments of 3 cents per member per month, shall be applied to the purchase and payment of 1,000 shares of Pittsburgh Coal Company preferred stock until the same shall be fully paid. Provided further, that the Trustees of this Fund shall preserve the 1,000 shares of Pittsburgh Coal Company preferred stock intact as the principal of said Pension Fund and apply only the earnings of the said stock together with the further payments of 3 cents per member per month to the payment of benefits under the provisions hereinafter specified.

After the 1,000 shares of Pittsburgh Coal Company preferred stock shall have been fully paid, as hereinbefore provided, and not before, any member of this Association who shall have been continuously employed at any of the mines of the Pittsburgh Coal Company and made continuous monthly payments of dues into this Association for a period of ten years or longer, and who, through old age, accident, or sickness, is unfitted to earn a living, shall be entitled to receive during the balance of his life a pension of \$10 per month, payable monthly. Provided, however, that the claim of each applicant for pension benefits shall be approved by the Executive Committee of the Branch of which he is a member.

If for any reason, it is desired to terminate the operations of the Pension Fund, provided in this Article, the proposition to effect such a termination shall be treated as an amendment to these by-laws and shall be subject to the provisions for such amendments contained in Article XVII. Provided, however, in the event of a decision of a two-thirds vote in a convention of delegates from all of the Accident and Death Associations of the Pittsburgh Coal Company Mines to terminate the operations of this Pension Fund, the 1,000 shares of preferred stock held by the ..... Trust Company, Trustees, as the principal of said fund, shall be sold by said Trustees at the best price obtainable on the open market at the time of said sale. Out of the proceeds of the sale of this stock and the balance of unpaid earnings of the same and monthly payments of dues, the Pittsburgh Coal Company shall be entitled to receive, first, the full amount of its contribution to the fund, namely, \$10,000, with interest, at the rate of six per cent. per annum and a one-third part of the balance of the total funds remaining in the hands of ..... Trust Company, Trustees. After such settlement with the Pittsburgh Coal Company for its proper share of the fund, the balance shall be divided as the majority vote of the convention, which decided upon the termination of the fund, may prescribe.

## ARTICLE XVII

Section 1. These By-Laws shall not be changed or amended, except by a two-thirds vote in a convention of delegates from all of the Accident and Death Associations of the Pittsburgh Coal Company mines, duly called by the officers of the Pittsburgh Coal Company Employees' Accident and Death Association. The officers of the Pittsburgh Coal Company Employees' Accident and Death Association may call a meeting of delegates from the various Branches, under the conditions hereinafter specified, whenever, in their judgment, such a meeting is necessary.

It shall be obligatory upon the officers of the Pittsburgh Coal Company Employees' Accident and Death Association, under the conditions hereinafter specified, to call such a meeting of delegates whenever the majority of the Branches signify their desire for such a meeting by duly recorded majority votes of their respective Executive Committees.

Sec. 2. When a convention of delegates from the various mines' Accident and Death Branches is to be held, due notice of the same shall be mailed to the Secretary of each Local Executive Committee not less than three months prior

to the date of such convention; said notice shall clearly set forth the questions that are to be considered and acted upon in the proposed convention, and no other question shall be considered or acted upon at that convention.

Committee recommends that for the expediting of the business of Convention of this Association, that Association Treasurer be given authority to call in seven duly elected delegates two days prior to the date set for holding Convention, for the purpose of placing convention roll and resolutions in shape for Convention to begin work.

A printed personal injury blank and certificate of fitness or unfitness for usual employment must accompany each warrant for accident pay.

#### Personal Injury Blank and Doctor's Certificate

Date of issue .....Boss  
 Name, .....  
 Residence—House No. ....Mine  
 Nationality .....Age .....  
 Nature of Injury .....  
 Date .....

This is to certify that the person described above is .....  
 or .....to follow his usual employment.

Doctor's signature .....

Check No.....

### MINE INSPECTION AND ACCIDENTS

The greatest mining country in the world, with the exception of the United States, is Great Britain. Under the Coal Mines Regulation Acts of 1887 and 1896, and the Metalliferous Mines Regulation Acts of 1872 and 1875, the mines of that country are under the supervision of twelve inspectors and twenty-six assistant inspectors. The number has been the same for many years. These thirty-eight inspectors have under their control 3,940 mines, and look after the health and safety of 887,524 employes, of whom 708,398 are inside employes. These inside workers produced during the year 1905, 253,227,072 tons of minerals, of which 236,111,150 tons were coal. If the work had been allotted equally among the inspectors, each would have had the care of 103 mines and 18,642 inside employes, and a production of 6,663,870 tons. In addition to the above, these inspectors have supervision over the 59,978 employes who work inside of the numerous stone, slate and other quarries, which produced during the year 46,744,912 tons of minerals.

In the anthracite coal fields of Pennsylvania the number of inspectors has been increased since 1900 from eight to twenty, and in the bituminous fields from ten to twenty, in the hope that the augmented number might result in bringing about a decrease in the number of accidents. The records show, however, that the reverse has been the case and it will be necessary, therefore, to resort to some other method to bring about this greatly desired result. We make a comparison in this article between the operations in Great Britain and in Pennsylvania. As there was a strike in the anthracite region in 1906 that lasted nearly two months, the production, number of mines and employes are taken as reported for the year 1905, the banner year in the coal industry, with the number of inspectors as at present in service. The number of mines in opera-

tion was 633; the number of persons employed inside was 116,371; with a production of 70,220,554 tons. If the work had been divided equally among the twenty inspectors, each would have had under his supervision, 32 mines, 5,818 inside employes, and a production of 3,511,028 tons. In giving the bituminous figures the number of mines, employes and production for 1906 are used, with the number of inspectors as at present. The 1,386 bituminous mines in operation produced during the year 129,532,989 tons of coal, employing inside of the mines 141,862 persons. If the work had been divided equally among the twenty inspectors, each would have had under his care 69 mines, 7,093 inside employes and a production of 6,476,649 tons.

	Number of inspectors	Number of mines in charge of each inspector	Number of employes inside of mines in charge of each inspector	Production in tons for each inspector
Great Britain, .....	38	*103	18,642	6,663,870
Pennsylvania—Bituminous district, .....	20	69	7,093	6,476,649
Pennsylvania—Anthracite district, .....	20	32	5,818	3,511,028

Assuming that the English Government takes as great care as any other European country of the mine workers, it appears that Pennsylvania is greatly in advance of European countries in the care and protection afforded its mine workers, and yet the number of fatal accidents in this State is greater than in any of those countries. The Department has frequently been subjected to very unfair criticism for undertaking to place the responsibility for fatal accidents where it belongs. In view of this condition, the reports of the inspectors for the year have been very carefully examined with the following results. Of the 557 persons killed in and about the anthracite mines, 274 were killed by their own carelessness, variously designated as thoughtlessness, recklessness and ignorance. Possibly in many cases there was a combination of these mental weaknesses. Sixty-nine of the victims lost their lives through the carelessness of other persons, 188 through unavoidable accidents, and 26 by accidents for which the responsibility could not be placed. Of the 477 persons killed in and about the bituminous mines, 307 were killed by their own carelessness, 10 by the carelessness of others, 142 by unavoidable accidents and 18 by accidents the responsibility for which could not be placed. In other words, 57 per cent. of the fatalities of the two regions were due to the carelessness of the victims, 7 per cent. to the carelessness of other persons, 32 per cent. to unavoidable causes, and 4 per cent. to accidents the responsibility for which could not be placed. The tragic aspect of these casualties is greatly increased by the fact that about two-thirds of them were due to carelessness. The remaining 34 per cent. may be taken as a reasonable percentage of accidents that will befall persons who follow the vocation of the

\*In addition to these mines the inspectors have charge of all the quarries.



mine workers. It seems impossible to adopt any method, either by legislative enactment or by special rules, that will tend to lessen the loss of life among the miners. Their constant association with danger, their ignorance oftentimes of the language spoken by the foremen and their fellowworkmen, and sometimes their inexperience, render them an easy prey to the dangers that surround them. It is true that during the year 1906 the number was somewhat less than in previous years, but the average number of fatalities for the past six years has been as great, per one thousand employes, as when the State had only 18 inspectors. The fact is, that the inspectors cannot be expected to look after the safety of the miners except at certain periods, and even if their number were to be doubled, it is doubtful if the loss of life would be reduced. The State has now almost as many inspectors as the companies have managers or general superintendents, and any further increase would tend to have the superintendents and bosses rely upon the inspectors to a greater extent than the law contemplates. The safety of the employes is first of all a matter of their own care and thoughtfulness, although the superintendents, mine foremen and fire bosses (who can in a general way be looked after by the inspectors) are of course more or less responsible for the safety of the persons who work under their supervision. It is possible that these remarks may be criticised by the mine workers or their leaders, but it is a fact that the miner of Pennsylvania is taken better care of by the inspectors than any other miner in the world. The foregoing table shows this quite conclusively, as the English Government undoubtedly takes as great care of its miners as any other European country. It should be noted that the bituminous inspectors have about twice as many mines, many more inside employes, nearly twice the production and cover four or five times as much territory as the anthracite inspectors. It is contended that the anthracite mines are much more dangerous than the bituminous mines, but this is a mistake, as both regions show nearly the same number of fatal accidents inside the mines from falls, cars, and explosions of gas per thousand employed.

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### DUTIES PERFORMED BY MINE INSPECTORS

The inspectors of the anthracite region spent 2,700 days during the year at mine inspection, 488 days investigating accidents, 119 days attending inquests, 260 days consulting on mining and legal matters, 45 days attending court, 154 days examining applicants for mine foremen, 11 days attending mine fires, 42 days investigating the ages of children, 1,482 days inspecting maps and performing routine office work. In view of the fact that the whole region was idle for about six weeks, the record of the work of the inspectors is very creditable.

It is hardly necessary to state that the lot of a mine inspector is a very hard one physically, besides being one of great danger. In case of an accident the inspector is supposed to lead in the work of rescue, and if he is not competent and well equipped the rescuing party might meet with even a greater calamity than the one that made the work of rescue necessary. The mine inspector must be

physically strong and have a steady nerve, great courage and a large degree of caution. These qualifications combined with a practical and theoretical knowledge of mining fit him for a successful career. It is a pleasure to have supervision over such men, and if politics, which was injected into the law compelling the inspectors to be elected, could be kept out of the service, the efficiency of the inspectors would never be questioned. The American miner, however, will demand the best talent that the country can produce to fill the office of inspector and we hope to see but little, if any, deterioration in the character of the men who fill this important position. The standard should be raised if possible instead of lowered and the salaries should be increased so there would be an incentive for the best talent in the State to aspire to the office, as is the case in Great Britain.

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### VENTILATION OF MINES

The mine laws of Pennsylvania, both anthracite and bituminous, provide for a sufficient quantity of air for the mines, if properly conducted to the working faces, to keep them in reasonably healthy condition. But notwithstanding the laws regarding this matter, we hear constantly of men in non-gaseous mines, and sometimes in gaseous mines, suffering from powder smoke and foul air due entirely to the foreman's neglect to carry or conduct the air to the working faces. There can be no excuse for this dereliction of duty, as the companies in almost every instance have provided sufficient power for ventilating all parts of their mines. The law, however, should be more definite as to where the air currents should be measured. In addition to the places mentioned in the law, the mine foreman should measure the air once each week in the last cut-through or cross-cut in the first room or breast, and in the last cut-through in the last room or breast of every entry or gangway, and at the last cut-through or cross-cut in each entry or gangway. The inspector, on his inspection tour, ought also to measure the air at the same places, which would serve as a check on the work of the foreman. The air measurements by the foreman, as proposed in the new bituminous law, are nothing more than a farce, and of no value whatever.

The mine worker is entitled to an ample quantity of air to carry away the noxious and explosive gases from his working place so that he can be reasonably safe and healthy. The Department will, hereafter, expect the inspectors to measure the air at the points mentioned above where it is stated the mine foreman should measure it.

On several occasions it has been reported on undoubted authority that many of the superintendents interfere with and obstruct the mine foremen in their endeavor to carry out the provisions of the law, which demand that the air current be conducted to the working faces, by neglecting to provide boards and canvas and other things that may be needed. As the foreman is directly under the superintendent, he cannot very well enter complaint, unless at the same time he tenders his resignation. To remedy this evil, I would suggest that the following, in substance, be added to the mine laws of this State.



"It is hereby made the duty of the superintendent personally, if practicable, (if not he shall send an equally competent person) to inspect every working place in every mine, under his charge, once every month, to see that the provisions of the mine law are complied with generally, and he shall especially see that the ventilation is conducted to the working faces in sufficient quantities to drive away smoke and noxious gases, so that the working faces shall be in a healthy condition to work in. He, or his deputy, shall enter in a book with ink, provided for that purpose by the Department of Mines, the true condition of the mine as to its general safety and drainage, and especially state if the working faces and entries are properly ventilated according to law. The book shall be kept in the mine office at the mine, and open for examination by the inspector and any workman who may think his place is not properly ventilated. It shall be the duty of the inspector to enter complaint to the court against any superintendent that fails or neglects to carry out this provision of the law. If the superintendent be found guilty, he shall be fined not less than \$100 for each offence, or be imprisoned for not more than ten days, or both, at the discretion of the court."

### CHILD LABOR IN PENNSYLVANIA

So much has been said in the daily press and by public speakers on the question of child labor in the mines of Pennsylvania, that the people generally believe that this great State is very derelict in its care and protection of the youthful workers. This is not the case, however, as a very careful investigation has demonstrated. The Department has made a very earnest effort to ascertain the facts of the matter. From reports of the mine inspectors, superintendents, foremen and others, it has been ascertained that no child under the age of 12 years is at present working in or about the bituminous mines of this State. The bituminous mine law of May 15, 1893, provides in Section 1, Article 17, that, "no boy under the age of twelve years shall be employed or permitted to be in the workings of any bituminous coal mine for the purpose of employment or for any other purpose." The anthracite mine law of May 2, 1905, in Section 1, provides, "that it shall be unlawful for any person, firm, co-partnership or corporation to employ any minor child, under the age of sixteen years, inside of any anthracite coal mine, or to employ any minor child, under the age of fourteen years, in any anthracite coal breaker or colliery, or around the outside workings of any anthracite coal mine." The inspectors and the superintendents of the bituminous mines assert positively, and there is no reason for doubting their word, that no boy under 12 years, the legal employment age, is working inside or outside the bituminous mines. The inspectors and the superintendents of the anthracite mines make an equally positive statement that no boy under 14 years, the legal employment age, is employed outside the mines, and no boy under 16 years, the legal employment age, is employed inside the mines. It is possible that while the inspectors and superintendents state what appears to be true to them, in certain cases it might be that the parents or guardians make false statements regarding the ages of the boys. This Department does not approve the present provisions of the anthracite and bituminous laws on this point, but it is its duty to

enforce them as fairly as possible. It is only proper to say, however, that in justice to both the operators and the miners employed, the age should be the same in both the anthracite and bituminous regions. The minimum requirement should be 14 years, but if the Legislature in its judgment should think it wise to enact a law making the limit 16 years, the Department would cheerfully and energetically enforce the provision. While in Cincinnati, at a Child Labor Convention held December 13-15, Owen R. Lovejoy, Assistant Secretary of the National Child Labor Committee, in referring to child labor in the soft coal mines, said in part as follows:

"The Committee's investigations of child labor in the soft coal region have extended over sections of Pennsylvania, Maryland and West Virginia. The field thus far studied does not justify us in attempting any estimate of the number of children employed. Child labor in the bituminous industry differs from that in the anthracite, as in the former there is no slate picking, and the children employed are inside the mine. They work as runners, drivers, doorboys and couplers, while, perhaps, the larger percentage are employed with their fathers in loading coal.

In one Pennsylvania mining borough, where from 1,000 to 1,200 people are employed in the mines, it was estimated by several of the miners and superintendents, the Chief Burgess and the Superintendent of Schools, that between 175 and 200 boys under 16 were employed in the mines.

It is claimed by many miners and citizens in the coal region that where the mining companies maintain general stores and own a number of houses for rent, they customarily bring into the region a larger number of people than can be regularly employed. The result is that while the mine is operated every day, each miner will get from three to four days' work in a week, while the number of coal cars assigned each man in a day is limited. If a man finds it impossible to maintain his family under these conditions, he is tempted to take his own boys into the mine, and on their account is allowed 50 per cent. more cars (called a half turn) than if working alone. Sometimes, it is said, these boys are too small to be of any real assistance, but their presence enables the father by overworking to earn a larger wage.

In one borough, inhabited principally by Swedes and Italians in about equal numbers, it was found that the children of the Swedes were kept in school through the entire course, and no young Swedes were found working in the mines; while the Italian children ordinarily left school in the second and third grades and were extensively employed. That these Italian children should be protected from the misguided desire of their parents to enlist them in the army of wage earners is evident to all who are familiar with their native abilities.

Two mines were found side by side in a Pennsylvania mining district, one operated by a large company closely identified with a coal-carrying railroad, the other an independent mine. The conditions of mining did not materially differ, yet in the former nearly ten per cent. of the employes were young boys, while in the latter none under 16 were found."

I doubted the correctness of this statement and on December 19 wrote the bituminous inspectors, quoting Mr. Lovejoy's remarks and instructing them as follows:

"If from your present knowledge or from information that you may hereafter receive, you know that the conditions exist as depicted by Mr. Lovejoy, you are hereby instructed to prosecute to the fullest extent of the law all foremen and superintendents of coal mines, who are found to be employing in or about the mines children under the legal age of twelve years. I have always been under the impression that no children under twelve years were allowed to work in and about the bituminous mines.

You will please take this matter up and report as soon as possible to the Department what violations, if any, you find of the law regarding the employment of children."

The tenor of the answers received from the inspectors was to the effect that they had no knowledge of any boys under legal age being employed in or about the mines. In almost every instance the inspectors laid stress upon the strict enforcement of the law that obtains in the bituminous region with regard to the employment of boys, and they were emphatic in expressing the opinion that Mr. Lovejoy had based his statement upon information that was false

and misleading. The reports of the inspectors confirmed the opinion of the Department that the law of the bituminous region of Pennsylvania is faithfully carried out. In all cases of doubt the inspectors request the parents or guardians to produce affidavits showing that the ages of the boys are within the required limit. In fact before boys are employed, if there is any doubt as to their age, the superintendent or mine foreman demands a satisfactory affidavit.

During the year 1906 the Department received a complaint from Sullivan county, in which it was alleged that a dozen or more boys under the legal age were employed in the mines of that county. The matter was immediately taken up with the inspector of that district and he was advised to proceed against the parents or guardians of the boys for violation of the law. It was found impossible, however, to obtain evidence to substantiate the charges, and although the Department expended one hundred and twenty-five dollars in its effort to ascertain the guilty parties it was unable to do so.

### CARE OF WIDOWS AND ORPHANS

During the years 1900 to 1906 inclusive, 3,538 persons lost their lives in and about the anthracite coal mines of Pennsylvania. These casualties left 1,908 widows and 4,475 orphans under the age of 14 years.

In view of the great clamor regarding the care of children in and about the coal mines, I desire to say that I have as much sympathy for this class of workers as any of the good people who are striving in season and out of season in their efforts to raise the employment age. It is evident that these enthusiasts are ignorant of the great suffering that occurred among the widows and orphans about the mines at the time the employment age was raised from 12 to 14 years outside, and 14 to 16 years inside the mines. If they in their zeal for the welfare of this class of employes would suggest or bring about the adoption of some system whereby the widows and orphans could be cared for until the children had reached the employment age of 14 years, they would be accomplishing something in a practical way. They are no doubt actuated by a high moral sentiment, but moral sentiment does not provide food and shelter for helpless widows and children. It is proper to state here that the coal companies are endeavoring to comply with the law in this respect, and they do so, except, perhaps, in some cases where the mother, in need of food and shelter for herself and children, is led to misrepresent their ages when seeking employment for them. It is doubtless, however, if any one would think of sending a woman to prison under such circumstances, even though she be guilty of a plain violation of the law.

I repeat what I have said before, that when a State enacts a law prohibiting the employment of children until they reach the ages of 14 and 16 years respectively, it should in justice provide some way whereby the children can be taken care of until they are legally permitted to be employed. A great work has been done by the people of Pennsylvania and other states for the elevation of coming generations, by raising the employment age, but I have yet to hear of these people even making any suggestion as to how the children of needy persons shall be cared for until the age limit is reached. I have



lived a lifetime among the anthracite mine workers and know whereof I speak when I say that humanity demands that some provision be made to care for the widows and orphans under the circumstances named. To illustrate this point I cite one instance. A father was killed in the mines, leaving a widow and six children. Two of the eldest children got work, one in the mine and the other in the breaker. The one received \$6.50 a week, the other \$4.50 a week. When the employment age was raised from 14 to 16 inside, and from 12 to 14 outside, the eldest boy was sent from the inside to the breaker and his wages were reduced to \$5.00 a week; the younger son was sent home. And the result was that this woman's income was reduced from \$11.00 to \$5.00 a week.

I have on several occasions called attention to the injustice done the workers in the anthracite region by imposing upon them a different employment age from that of the bituminous region.

### ROBBING PILLARS

The term "robbing pillars" in the anthracite region, and the term "removing pillars" in the bituminous region are identical in their meaning. In the anthracite region, especially, this action on the part of the coal companies has been regarded by the press and the public generally as illegal, and the reports that have been printed in some of the daily papers, particularly those outside of the coal regions, have led to the belief on the part of many persons that the Department of Mines has been derelict in its duty because it did not prevent the companies from robbing or removing the pillars in their mines. The attention of the Governor of the Commonwealth has at different times been called to this matter, by the persons whose property has been menaced, and in each case the Department has been asked for an explanation. The power, however, to prevent this action on the part of the companies does not lie with the Department. The most prominent case of this nature was one that occurred in the city of Pittston several years ago where a coal company removed the pillars from its mines, and in so doing affected the public streets of the city, and also the private property of individuals. Investigation was made of the complaint, but the Department being satisfied that it had no jurisdiction in the matter, did not feel justified in interfering. This whole question is fully covered in the case of *Miles versus the Pennsylvania Coal Company*. The Supreme Court rendered an opinion in this case, written by Mr. Justice Mestrezat, sustaining the right of the company, under its contract, to rob the pillars. As the opinion is one of great importance, it is inserted herewith in full for the benefit of those interested. It declares against the recovery of damages by surface owners on account of the caving-in of the ground in cases where the lease provides that the coal company may remove all marketable coal.

## SUPREME COURT OPINION IN CASE OF MILES vs. PENNSYLVANIA COAL COMPANY

"By an agreement in writing, dated November 23, 1880, the plaintiffs, or those under whom they claim, demised, leased and to mine let to the defendant company "all the merchantable coal lying and being in the veins in, under and upon" a certain described tract of land in what was then Lackawanna township, Luzerne county, this State. The defendant company by virtue of this authority, mined and removed two-thirds of the coal, leaving the one-third thereof in the shape of pillars which support the surface. The company was proceeding to mine and remove the pillars, when the plaintiffs filed this bill in the court below, averring that the removal of the pillars would cause irreparable damage to the surface, and praying an injunction to restrain such action by the defendant company. The defendant filed an answer, averring that it had the right to mine and remove all the coal under the premises, including the pillars, and that any damage which might be caused to the surface of the land is released by the contract between the parties.

### MOTION REFUSED

A motion was made for a preliminary injunction, which was refused. An appeal was taken by the plaintiffs to this court, which was heard last year, and the decree of the court refusing the preliminary injunction was sustained: *Miles vs. Pennsylvania Coal Company*, 214 Pa. 544. On the return of the record to the court below, the case was proceeded in until a final decree, refusing an injunction, was entered, from which we have this appeal.

The single question raised by the appeal is whether the defendant company has the right to mine and remove all the coal under the plaintiffs' premises, without leaving sufficient pillars to support the surface. The answer to the question requires the interpretation of the lease and depends entirely upon the proper construction of that instrument.

An able and elaborate opinion was filed by the trial judge in the court below, on refusing the motion for a preliminary injunction, and will be found in the report of the case when it was here on the previous occasion. The law applicable to the interpretation of such contracts is there correctly stated as appears by the citation of our own cases and of other recognized authorities, and it is clearly pointed out that, applying the well-settled principles announced in those cases, the lease conferred upon the defendant company the right to mine and remove all the coal without leaving any pillars to support the surface, and without liability for any damage to the surface.

It is settled law in this State, that, in the absence of a contract providing the contrary, the owners of the mineral estate in a tract of land owes a duty, *ex jure naturea*, to the owner of the superincumbent estate of absolute support to the surface. The owner of the coal, like the owner of the surface, has an estate in land, but the former holds his subject to the right of the latter to demand that he do no injury to the surface by removing the coal. As we have said in a former case, the owner of the mineral must support the surface, if it requires every pound of coal to be left in place for that purpose. There can be no doubt that such are the reciprocal rights of the owners of the surface and of the mineral estate in this Commonwealth. The several cases of this court on the subject conclusively determine the question.

### EQUALLY SETTLED

While, however, the owner of the surface is entitled, as of natural right, to its support by the owner of the subjacent mineral estate, it is equally well settled that the common owner of both estate, or of the owner of the fee simple title to the tract of land, may by contract relieve the owner of the mineral estate from any duty to support the surface, and from liability for any injury or damage to it by mining and removing all the mineral. Being the common owner of the whole title and, therefore, having the *just disponendi*, he may make any legal disposition of the property he may desire. He may sell the coal and retain the surface, or he may sell the surface and retain the coal. In selling or leasing the coal, he may grant such rights to the vendee or lessee as either may desire or deem proper or necessary to remove the entire body of coal, as well as such rights in, through or over the surface, as may be necessary for the same purpose. In other words, having the absolute dominion over the property, he may grant such rights therein and thereto as may be agreed upon and are stipulated for in the contract. This naturally and logically follows from his ownership of the fee simple title to the property.

In *Barringer and Adams on Mines and Mining*, 676, it is said. "Though the right of surface support is absolute, yet the subjacent owner may be relieved of the corresponding obligation by a release from the surface owner or by the



terms of the instrument creating his estate." In *Williams vs. Hay*, 120 Pa. 485, Mr. Justice Paxson, speaking for the court, says (p. 495): "It is settled law in this State that where one person owns the surface and another person owns the coal or other minerals lying underneath, the under or mineral estates owes a servitude of sufficient support to the upper or superincumbent estate. This principle has no application where the same person is the owner of both estates, nor does it apply where, by the contract between the parties, they have covenanted for a different rule. Like any other right, the owner of the surface may part with the right to support, by his deed or covenant."

### IMPLIED RIGHT

*Scranton vs. Phillips*, 94 Pa. 15, was an action to recover damages for injuries done to a lot and the building thereon, by reason of the settling of the surface, caused by mining and removing the coal. It was held that the implied right of surface support might be excepted from the grant by apt words in the contract; and, in delivering the opinion, Mr. Justice Mercur, in construing the contract between the parties, said (p. 22): "Thus, in clear, express and distinct language, it was agreed, the owner of the mine, his heirs and assigns, should be exempt from the very liability now attempted to be fastened on him and his assigns. We see no reason why a person shall not be bound by his agreement to exempt another from liability for damages in working a coal mine, as well as from liability for damages resulting in the performance of any other kind of labor. No rule or policy of law forbids it." In *Smith vs. Darby et al.*, Law, Rep., 7 Q. B. 716, Mr. Justice Mellor says (726): "The man who grants the minerals and reserves the surface is entitled to make any bargain that he likes; both parties are just as much at liberty to make a bargain with reference to coals and minerals, as to make a bargain with reference to anything else."

The question, therefore, in this case, is whether the contract of the parties permits the removal of all the coal, including the pillars, by the defendant company, without liability for injury done thereby to the surface. If the plaintiffs, by their contract, have granted such right to the defendant company, they are not now in a position, against the wishes of the defendant, to recall it, notwithstanding it may be, as their counsel urgently insists, injurious to their interests. Both parties must stand by the contract, which, on proper application, the court is required to enforce. A careful examination of the contract convinces us that the only purpose which both parties had in view when it was executed was the mining and removal of all the coal, and that such mining operations by the lessee should be without regard to the effect they might have upon the surface. The different provisions of the contract all point to this as the main and important purpose of the parties in entering into the lease.

### ALL MERCHANTABLE COAL

The demise is of "all merchantable coal \* \* \* in the veins in, under and upon" the land; "together with the right to mine and remove said coal in said veins until all the merchantable coal has been mined and removed from said veins on said hereby leased premises." Then follow unlimited surface rights. The lessee is granted the right to use the lands "for the digging and making of all air-shafts to and through the surface of said lands, with the right to dig the same as in the opinion of the said lessee may be necessary for the proper working and ventilation of the workings in the said veins of coal."

It is further covenanted that the lessee company may use any shafts, slopes or other openings already opened on the demised premises; and the company is granted, without any restrictions whatever, "the right to deposit culm, dirt and refuse on the said lands hereby demised." The surface was further put under the servitude of the lessee for road purposes by the following covenant: "The said lessee shall have the right of way over the surface of the said hereby demised tract of land, for the construction and making of any and all railroads and the roads that may be necessary for the removal and transportation of coal during the continuance of this lease, and after the coal on said hereby demised tract of land has been exhausted."

It is apparent, we think, from these brief excerpts from the lease, that the intention of the lessors in entering into the contract was for the purpose of having the entire body of their coal mined and removed, so that they could realize upon it; and that this was to be done without regard to the effect of the mining operations upon the surface. The contract grants in terms all the coal with the right to mine and remove it. The surface rights, it will be observed, are unlimited and substantially confer authority upon the lessee to use the surface to the exclusion of its owners. The rights of the lessee company to the surface could scarcely be greater if the lessors had granted it the fee

during the continuance of the mining operations. These stipulations show the intention of the parties in entering into the contract, and that the manifest purpose on the part of the lessors was to realize upon the entire mineral estate.

### WITHOUT REGARD FOR SURFACE

In addition to the intention of the lessors, thus clearly disclosed, that the lessee should mine and remove all the coal without regard to the injury done the surface, it is specifically covenanted in the agreement as follows: "It is hereby further agreed that the said lessee shall not be liable for any falling in of any part or parts or all of the surface of the said hereby demised premises, in consequence of the mining and removing of all of the said coal, and the said lessors shall indemnify the said lessee against any liability for any falling in of any surface of any lots on said demised premises the surfaces of which may have been sold by said lessors." Here is an express covenant by the lessors not only relieving the lessee from injury to the surface, in consequence of the mining operations in removing all the coal, but also indemnifying the lessee against liability for injury that may be done to the surface of any lots which may be owned by other persons than the lessors. Read in connection with the stipulations in the lease granting the right to remove all the coal, this covenant against liability for injury to any part of the surface arising from the act of mining and removing all of the coal in conclusive against the contention of the lessors that the lessee is required under the lease to leave pillars, or any part of the coal, for the support of the surface.

As said by Mr. Justice Mercur in *Scranton vs. Phillips*, 94 Pa. 15, "In each case the question is, Did the parties agree there should be no obligation in regard to support?" In the case in hand, the agreement is explicit, and clearly confers upon the lessee the right to remove all the coal, without regard to the damage which may result to the surface. Of course, in exercising the right to remove all the coal, the lessee must use the proper methods in its mining operations, and must not, by careless and negligent mining, injure the surface (*Youghiogheny Co. vs. Allegheny National Bank*, 211 Pa. 319). But aside from this limitation, the lessee company may, under its contract, remove all the pillars which it has heretofore left to support the surface, and if it results in injury to the superincumbent estate, the owner has no redress against the company.

### CLAUSE NOT TENABLE

It is contended, however, by the plaintiffs that the following clause of the lease prevents the removal of the pillars and shows that the parties intended they should remain in place to support the surface: "It is hereby further agreed that the said lessors shall have the privilege, at any time, by their agent or engineer, to enter upon the workings of the said lessee in and upon the said hereby demised lands, and to satisfy themselves as to the correctness of the returns of the quantity of the coal mined and if said lessors may wish, at any time, to have more pillars left in the mines than it appears to be the intention of the said lessee to leave, or than said lessee may have left in similar workings in said hereby demised premises, the said lessors may, by written notice to said lessee, designate where and in what manner such pillars are to be left." Notwithstanding the very earnest argument of the plaintiffs' counsel in support of their interpretation of this clause of the contract, we are clear that it is not tenable. This clause must be construed, with the other parts of the agreement, with a view of giving effect to the whole instrument. It was not the intention that it should abrogate those parts of the agreement which give the lessee the right to remove all the merchantable coal with a release from liability for injury done the surface. That will not be presumed in the absence of language clearly importing such purpose. The first part of the clause gives the lessors the right to enter the mine to verify the correctness of the quantity of coal returned as mined by the lessee; and the latter part was to enable the lessors to ascertain if the mining operations were being conducted so that "all the merchantable coal could be removed." Both clauses were inserted in the contract to enable the lessors to protect their interests, and for that purpose, the latter had the stipulation inserted that they might "designate where and in what manner such pillars are to be left." The lessee company was impliedly required to conduct the mining operations skillfully and carefully, but the lessors intended by the stipulation in question to make themselves the judges of the fact, with authority to direct the place and number of the pillars necessary to accomplish the purpose. Had the pillars been removed or an insufficient number of pillars been left in the progress of the mining, it is apparent that it would have greatly diminished the quantity of coal which could have been removed from the mine, and consequently the amount of royalty which the lessors would have received. It was, therefore, necessary that the lessors secure their interests by a provision in the contract that they

might, at any time during the progress of the mining, require the lessee to protect the mine by additional pillars of such extent and in such locality as the lessors might designate. This was the manifest purpose of the clause in question. After all the coal, except the pillars, had been mined, and the pillars were no longer needed to protect the mine and the mining operations, the lessee was authorized by the contract to remove them and account to the lessors for the royalty.

The assignments of error are overruled and the decree is affirmed."

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## MINING EXAMINATIONS

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### Their Purpose and Importance—Methods of Conducting—The Use of Certain Text Books Allowable

The question of mining examinations has been freely discussed by Mine Inspectors, Mine Foremen, Mining Engineers and others in the columns of "Mines and Minerals," a mining journal published monthly at Scranton, Pa. I have read with much interest the various expressions of opinion, and in the preparation of this article have made free use of the ideas advanced by the different writers, especially those of Mr. J. T. Beard, M. E., Principal of the School of Coal Mining of the International Correspondence Schools, and I desire here to give Mr. Beard full credit for his valuable suggestions.

When all the means for the safeguarding of mining operations are considered, there is, perhaps, none of greater importance than the examination of candidates for certificates showing competency to fill the various positions of trust and responsibility connected with the work of mining. Even the enactment of mining law with all its affluent responsibilities and its far-reaching influence can hardly be considered as of equal importance with the certification of men to whose capability and judgment is to be entrusted the work of safeguarding the lives and health of a large number of their fellow-workmen.

For the purpose of properly examining candidates for certificates of competency and determining their individual fitness for holding such positions as they seek, the mining laws of Pennsylvania require the appointment of examining boards by the Governor and courts of several counties. These boards are appointed regularly each year, unless otherwise directed by law, and a great and general interest attaches to their work.

The purpose of the law requiring the examination of candidates for certificates of competency is to secure certified mine officials of greater intelligence and a broader experience. In order to carry out fully this intention of the law it is essential that the examination of candidates be such as to involve the practical application of the theory and principles of mining. In all examinations a certain number of questions are asked to show the general fitness, qualifications, and previous experience of the candidate. The other questions naturally divide themselves into two general classes, which have been unfortunately styled theoretical and practical questions, respectfully. The so-called theoretical questions are for the most part those involving any sort of calculation, or asking for the pro-



perties of gases or the explanation of a principle or law of mechanics, while a practical question is generally understood as being one designed to show the candidate's knowledge of conditions existing in mines or his judgment of what is the best way to meet those conditions. It is needless to say that this is a wrong classification and a wrong idea of the relation of theory to practice.

All laws and principles relating to the work of mining that have been tested in practice and found to be correct are no longer theories to be despised by the practical miner, and every intelligent mine official should be able to apply these principles so that they will be of great assistance to him in his work. It is not required of the man in charge of mining work that he should be able to demonstrate the truth of a principle or law which he employs in working out a problem, but he should be able to apply such principle or law correctly, or to select the proper formula from a textbook or handbook for the solution of any ordinary problem that presents itself in connection with the work in hand.

The duty of the examiners composing a mining board is to determine the candidate's ability to grapple with such problems as may reasonably be assumed to arise in the operation of a mine. It is only justice to the candidate, however, that he be allowed the same privileges in working out such a problem in the examination as are at his command in the office or at home. It is manifestly unfair to expect a candidate to work out problems in an examination and deprive him of those means he is accustomed to use in solving the same problems when they are presented in practice.

After a careful consideration of the conditions that surround the most desirable candidates in mining examinations the writer is convinced from his experience on examining boards and from his observation of the effect of the law requiring such examinations, that the present practice of our mining boards is wrong in this regard. The accomplishment of the good intended by the law is handicapped in the start by the established custom of examining boards in general, which has been blindly followed by mining boards, with little regard to the peculiar environment and special need of the candidate. The law does not contemplate opening positions of trust and responsibility to students without experience who can pass the best examination in arithmetic, or algebraic formulas, and yet the law, through the established practice of examining boards, has handicapped and in many instances thrust out entirely men of large experience because they have been unable to memorize certain formulas asked in the examination.

It is a fact that mining work requires the solution of numerous mathematical problems and no examination of mine inspectors, foremen, fire bosses, or hoisting engineers is complete or thorough that does not include much of this class of work. It is, therefore, absolutely necessary that the training of all competent mine officials of every class shall include what we may call a working knowledge of and acquaintance with some reliable and authoritative text-book on mining. The contents of this book from cover to cover should be familiarized so that the information it contains may be quickly found. When this is the case, which is quite general, the man of experience is well nigh lost when confronted in an examination by a mathematical question and he is deprived of the use of his old familiar book. Let an examiner tell us why a candidate's text-

book should not be his to use in those sessions of the examination when mathematical work is required. As well send a lawyer to court without his law, or a soldier to battle without his weapon as to expect some of our best men to stand examination on the mathematics of mining without their accustomed reference to their trusted book. Should not the aim of every mine examination be, first, to show the candidate's practical knowledge and acquaintance with mine work of every description, the laws and requirements in any way affecting the work; and, second, to show his ability to work out and answer the questions asked the same as he would work out these questions for himself in practice, in the office or at home? If a question involving numerical calculations came up in the office or at home the candidate would naturally refer to his textbook and find the formula that he required to make the calculation, and in a few minutes he would arrive at the correct answer. On the other hand, when the candidate reads this question in an examination where he is deprived of the use of such a textbook it is not one man in ten that will be able, in the brief space of time to be allotted to each question, to make the calculation required. No one expects the practical man to remember the rules and formulas that are required in numerical calculations, and except when a candidate is preparing for these examinations he does not attempt to memorize such formulas because he knows where he can find them when they are required.

The writer therefore suggests the advisability of dividing the written examination of candidates into two, three or more sessions, and allowing them ample time and the free use of textbooks (subject to the inspection of the board) at those sessions and devoted exclusively to questions requiring numerical calculations. At all other sessions no textbooks should be permitted whether the examinations are written or oral.

All questions that call for the expression of judgment or that are designed to show the candidate's knowledge of mining conditions or to ascertain his familiarity with the mining law must certainly be answered without reference to textbooks of any kind. Many of these questions when they arise in the mine demand an immediate answer. For this reason all such questions should be asked the candidate in an oral examination to determine his alertness and preparedness to meet such difficulties as they arise in the mine. In general, all questions regarding the mining law, and all questions relating to conditions or occurrences in the mine that demand prompt attention or immediate action on the part of the person in charge belong properly to the oral examination, because such questions should be answered promptly by the candidate, and any uncertainty, doubt or delay in answering this class of questions should be taken as indicating a certain lack of fitness of the candidate, provided the examiner has made clear the situation. In the oral examination both the examiner and the candidate should enter heartily into the spirit of the work so as to fully realize the need of the assumed situation. For example:

A mine is ventilated by two shafts; the mine is generating gas, the return current ordinarily carrying, say 2 per cent. of gas; the coal is anthracite and there is little dust; the hoisting shaft is the downcast; a stable for fifty mules is situated between the two shafts and venti-



lated by a scale of air off the main intake, the return from the stable passing through a regulator into the main return current near the foot of the upcast. There are 500 men at work at the face when a fire is discovered under considerable headway in the stable. You are the underground foreman; what will you do?

There is no need for mathematics in the answer to this question, and the examiner can discern no trace of excitement in the calm animated face of the candidate as he almost shouts: Notify the men; close the emergency doors at the intake end of the stable; lay a line of hose through these doors and get water on the fire quick. Stop the fan? some one asks, No! The answer is sharp and strong; the men are being hoisted as fast as they reach the shaft; there is no confusion; every man remaining below is at his post, and the calm satisfaction of the foreman candidate betrays his confidence that he has the situation well in control.

In deciding upon the fitness of a candidate to hold the position for which he is an applicant the board of examiners should consider the candidate's qualifications separately with respect to their degree of importance, allotting to each a fixed number of points. The chief points to be considered are: (1) Personal fitness, as determined by a candidate's self-possession, his personal address and bearing, general health, etc.; (2) education and experience, knowledge of mining work and conditions, as determined by his written examination; (3) the quickness, alertness or what is called the personal equation of the candidate, and his power to act or ability to grasp and understand a possible situation or condition, as determined by the promptness and correctness of his answers to the questions asked him in the oral examination. An excellent plan to adopt in the examination of candidates for important mining positions is to allow, say 300 points for the personal qualifications of a candidate, 300 points for the oral and 400 points for the written examination out of a possible 1,000 points. The candidate must receive a total of 750 points to pass the examination. By this apportionment of points it would be possible to reject an undesirable candidate who by his knowledge and experience would pass the examination and receive a certificate, but who is, perhaps, totally unfit for the office owing to ill health, an irascible temper, lack of personal force or determination, lack of skill in dealing with men, or other like unfitness.

The writer bases his argument in favor of a proper and limited use of textbooks by candidates in examination on the ground that the candidate should not be subjected in the examination to conditions more difficult than those that surround him when obliged to work out the same problems in the office or at home, when all engineers, superintendents, and foremen resort to a free use of textbooks. This argument is intended to apply only to such questions and problems occurring in daily practice as do not demand an immediate answer in the mine, as all such questions should be answered without reference to books of any kind. The point is to make the examination fulfill as nearly as possible the conditions that obtain in practice.

#### Reports of the Miners' Examining Boards for the Year 1906

There has been much said for and against the act of July 15, 1897, entitled, "An act to protect the lives and limbs of miners from the dangers resulting from incompetent miners working in the anthracite

coal mines of this Commonwealth, and to provide for the examination of persons seeking employment as miners in the anthracite region, and to prevent the employment of incompetent persons as miners in anthracite coal mines, and providing penalties for the violation of the same."

The intention of this law was laudable, as it was supposed that it would add to the safety of the mine workers by barring out incompetent persons from the anthracite coal mines; but very soon after its enactment the Examining Boards apparently forgot its purpose and for several years its enforcement has been nothing but a farce. In fact any person who has had a dollar to pay could obtain a certificate regardless of his lack of qualifications; and the result is that to-day a large number of persons are employed in the gaseous mines who never saw a coal mine, or any other mine until they reached the anthracite region. The law provides that the applicant for the position of miner must have had two years' experience, and he must also be able to answer twelve questions in the English language, and be temperate and sober. It is a fact, however, that thousands of persons although they may have worked for years with miners cannot answer intelligently twelve questions in the English language, and yet in many instances these men have been given certificates of qualification. The report of the Examining Board of Lackawanna County which is the only county that complied with the law in this respect shows that during the past year 354 certificates of qualification were granted to the applicants for miners' certificates in that county of whom 70 were American, 33 English, 19 Welsh, 4 Scotch, 13 Irish, 3 German, 47 Russian, 17 Polish, 77 Austrian, 1 Lithuanian, 57 Italian, and 13 Polish Russian. These figures show who are to be the miners of the future. It would seem that the old stand-bys of the anthracite region, the English, Welsh, Scotch, Irish and German, are going elsewhere where they can be employed as miners without having to serve two years as laborers or perjure themselves. If this law shall continue in force for ten years longer, there will be very few miners of the nationalities mentioned working in the anthracite region. Only 72 of these nationalities received certificates last year in Lackawanna County as against 212 from Continental Europe. No fault is to be found with the latter class of workmen, as they make good miners and good citizens after a period of years, but it would be preferable to have at least one-half of the certificates issued to what is generally termed the English speaking race, and also the Germans. It has been suggested that this law be amended by striking out the two-year clause and inserting a more stringent clause regarding the examination of the applicants as to their knowledge of practical mining and the gases to be encountered in coal mines. It is also suggested that the provision of the law regarding twelve questions to be answered in the English language be strictly enforced. If this latter requirement were enforced these people within a year or two would no doubt be able to speak and understand the language of their adopted country. Under the present conditions they make no effort to learn the English language. They flock together in certain sections of the different counties, and live very much as they did in Europe. It is also suggested that the law be made applicable to gaseous mines, for the reason that in non-

gaseous mines the ignorant miner can injure no one but himself, while in gaseous mines his inexperience might cause the loss of other lives. At any rate there is room for improvement in the law, and also great room for improvement in carrying out its provisions. The Department has suggested that the Examining Boards be paid by the State for every day spent in the examination of applicants for certificates of qualification. The Boards should also send to this Department all the papers of successful applicants, with the questions and answers as propounded by the Boards. All fees received from the applicants should be sent to this Department, and the successful candidates should receive their certificates from the Department, properly attested with the State seal. This would no doubt relieve to a great extent the odium that now rests upon these examinations. If the present law, the evident intention of which was to safeguard the lives of the mine workers, cannot be properly enforced, it should be repealed. The leaders of the mine workers in conjunction with the operators or their superintendents should prepare a bill with simple requirements in three or four sections that would cover this whole matter, or they should ask the Department of Mines to prepare a bill.

## COAL PRODUCTION IN PENNSYLVANIA

It has always been a matter of speculation as to what the production of coal in Pennsylvania would be if all the mines were to work to their full capacity for a reasonable maximum number of days, say 280, in a year. The table herewith shows the actual number of days worked in each district during 1906, and the average daily production; also the total average production per day for the region, 299,357 tons. Assuming that the mines work 280 days a year, the total production for the region would be 83,819,960 tons, and if it were possible to work 300 days the production would be 89,807,100 tons. The table also shows the production of each district on the same basis. In arriving at the average number of tons produced per day, the total number of days was divided into the total production of each mine in each district.



Districts	Number of days worked (in breakers)	Production in tons per day*	Estimated annual produc- tion of 280 days*
First, .....	195	15,084	4,223,520
Second, .....	189	18,736	5,246,080
Third, .....	191	19,267	5,394,760
Fourth, .....	197	19,972	5,592,160
Fifth, .....	141	18,894	5,290,320
Sixth, .....	165	16,951	4,749,080
Seventh, .....	186	18,166	5,086,480
Eighth, .....	198	16,774	4,696,720
Ninth, .....	206	20,500	5,740,000
Tenth, .....	217	16,531	4,628,680
Eleventh, .....	203	30,215	8,460,200
Twelfth, .....	236	12,949	3,625,720
Thirteenth, .....	228	12,345	3,456,600
Fourteenth, .....	217	9,984	2,795,520
Fifteenth, .....	234	9,898	2,771,440
Sixteenth, .....	233	10,407	2,913,960
Eighteenth, .....	208	15,686	4,392,080
Nineteenth, .....	210	9,854	2,759,120
Twentieth, .....	255	7,134	1,997,520
.....		299,357	83,819,960

\*Production from washeries not included.

## INCREASE IN PRODUCTION AND NUMBER OF EMPLOYEES BETWEEN 1885 AND 1905

It will be a convenience to persons who are interested in statistics, or engaged in mining coal, or employing labor, to be able to see at a glance the percentage of increase in the production of coal and in the inside and outside employees in the anthracite region. The table herewith shows that in 1885 the production of coal was 34,135,583 tons, while in 1905 it was 70,220,554 tons, an increase of 36,084,971 tons or more than 105 per cent. In 1885 the number of inside employees was 62,901, in 1905 the number was 116,371, an increase of 53,470 or about 85 per cent. The number of outside employees in 1885 was 37,419, in 1905 the number was 51,883, an increase of 14,464 or more than 39 per cent. It will be seen that the production of coal has increased much more rapidly than the number of employees, especially the outside employees. In 1885 the breakers worked an average of 204 days, and the 62,901 inside employees produced 34,135,583 tons, an equivalent of 544 tons for each employe. In 1905 the 116,371 inside employees worked practically the same number of days and produced 70,220,554 tons, an equivalent of 517 tons for each employe. These figures show a decrease in the production per each inside employe of 27 tons as compared with 1885. This decrease in twenty years can be attributed to the working of the smaller veins, and to the fact that as the mines are at present more extensively opened than they were in 1885, it is necessary to increase greatly the number of company or day men who are employed to keep the gangways and the airways in safe condition and to look after the other parts of the mines that need attention.



The 37,419 outside employees in 1885 prepared for market 34,135,583 tons of coal, an average of 912 tons for each employe. The 51,883 outside employees in 1905 prepared for market 70,220,554 tons, an average of 1,353 tons for each employe, or an increase of 441 tons for each employe. The great increase in the amount of coal produced by the outside employees is accounted for by the introduction of machinery in the breakers to supplant manual labor, and also by the large increase in the production from washeries, and the utilizing of the smaller grades of coal for steam purposes. The percentage of small sizes is largely in excess of what it was in 1885. Among coal men it is a well known fact that the cost of preparing a ton of coal of the larger sizes, from chestnut up, for market, is much greater than it was in 1885. The care that must be taken of the modern coal breakers, and the wear and tear of machinery, are items of great expense. The effect of the acid water from the mines upon the screens, jigs and other machinery, even when copper and manganese bronze are used, is very damaging and entails a great deal of expense.

Years	Production in tons	Inside employees	Outside employees
1885, .....	34,135,583	62,901	37,419
1890, .....	40,166,327	73,613	46,306
1895, .....	50,847,104	89,251	54,454
1900, .....	51,217,318	94,140	49,684
1905, .....	70,220,554	116,371	51,883

Percentage of increase in production, 1885-1905, 105.71 per cent.  
 Percentage of increase in employees inside, 1885-1905, 85.01 per cent.  
 Percentage of increase in employees outside, 1885-1905, 38.68 per cent.

Table showing number of mines, number of employees inside and outside, and production by districts—Anthracite and Bituminous—1906

Districts	Anthracite			Bituminous				
	Number of mines	Number of employees inside	Number of employees outside	Production (gross tons)	Number of mines	Number of employees inside	Number of employees outside	Production (net tons)
First, .....	54	6,421	2,091	3,253,206	First, .....	56	7,646	9,039,185
Second, .....	33	7,214	2,418	3,555,034	Second, .....	70	7,660	9,600,673
Third, .....	28	7,809	2,323	4,350,726	Third, .....	86	6,369	4,153,437
Fourth, .....	27	7,276	2,535	4,947,754	Fourth, .....	99	7,419	4,512,626
Fifth, .....	48	6,875	2,546	2,761,574	Fifth, .....	62	6,132	4,290
Sixth, .....	32	6,403	2,523	3,046,111	Sixth, .....	88	9,964	8,685,790
Seventh, .....	36	6,239	2,413	3,722,445	Seventh, .....	74	8,013	8,162,108
Eighth, .....	26	6,564	2,397	3,467,513	Eighth, .....	122	7,593	7,045,774
Ninth, .....	28	6,603	2,403	4,576,441	Ninth, .....	82	7,397	8,890,177
Tenth, .....	39	6,468	2,529	3,613,985	Tenth, .....	95	8,044	8,978,620
Eleventh, .....	110	9,371	5,306	6,139,951	Eleventh, .....	60	6,372	4,918,786
Twelfth, .....	14	5,261	2,769	3,052,797	Twelfth, .....	68	9,302	9,073,711
Thirteenth, .....	18	5,181	3,448	3,052,976	Thirteenth, .....	57	9,104	6,818,735
Fourteenth, .....	21	3,315	2,292	2,210,434	Fourteenth, .....	65	9,169	9,135,075
Fifteenth, .....	24	4,422	2,535	2,312,746	Fifteenth, .....	128	8,499	9,588,387
Sixteenth, .....	40	4,663	2,620	2,479,662	Sixteenth, .....	62	7,670	4,693,333
Seventeenth, .....	4	6,145	3,428	3,334,486	Seventeenth, .....	66	8,709	9,477,029
Eighteenth, .....	48	7,767	2,767	7,288,264	Eighteenth, .....	140	6,340	8,564,741
Nineteenth, .....	21	3,327	1,304	2,204,192	Nineteenth, .....	140	6,340	3,265,782
Twentieth, .....					Twentieth, .....			
Totals, .....	4635	114,998	51,177	64,410,277	Totals, .....	*1,480	141,862	129,582,989

\*Included in Eleventh and Eighteenth districts.

†688 in operation.

\*1,386 in operation.

## ACCIDENTS

## Number of Young Persons Killed or Fatally Injured in the Anthracite and Bituminous Regions

The records of the past year show two remarkable coincidences in the number of fatalities inside the mines. There were 52 employes killed between the ages of 16 and 18 years, 26 in each region; and 74 employes killed between the ages of 18 and 21 years, 37 in each region. In addition to these fatalities, there were killed outside of the anthracite mines 16 boys between the ages of 14 and 16 years, and 21 between the ages of 16 and 21 years. In the bituminous region no fatalities occurred among the outside employes under 21 years of age. The figures given show that 63 persons between the ages of 16 and 21 were killed inside the anthracite mines, of whom 3 were miners between the ages of 20 and 21 years, 22 miners' laborers between the ages of 17 and 21 years, 18 drivers and runners between the ages of 17 and 21 years, and 6 door boys between the ages of 16 and 18. Of the others killed, including engineers, firemen, brakemen and timbermen, there were 14 whose ages ranged from 17 to 21 years. If it were true, as has been asserted, that a large number of the boys employed in the anthracite mines are under the legal employment age of 16 years, it is remarkable that none of them should have been killed. This fact alone is strong proof that the boys employed are of legal employment age.

In the bituminous mines 26 boys were killed whose ages ranged from 14 to 18 years, and 37 killed or fatally injured between the ages of 18 and 21. Of the former, 11 were miners, 4 loaders, 4 drivers, and 7 were otherwise employed. Of the latter, 13 were miners, 11 loaders, 7 drivers, and 6 were otherwise employed. Those otherwise employed comprise machine runners, motormen, brakemen, scrapers and laborers. It should be noted that no person under 21 years of age was killed outside of the bituminous mines, and no one inside under the age of 14 years. It is a regrettable fact that 3 of the so-called miners killed were boys 14, 15 and 16 years of age, respectively. The foreman who hired these boys to do a miner's work should be sentenced to a term of imprisonment.

The table herewith has been prepared in compliance with the requests of certain superintendents and managers of companies whose mines are located in more than one inspection district. The data has been collected from the Inspectors' reports and arranged to show the total production of each company, the number of fatal accidents, the production per fatal accident, the number of employes inside, and the number of fatal accidents per one thousand employed, for the years 1902 to 1906 inclusive. Without making any comparison of the figures relating to accidents, the attention of the managers, superintendents and mine foremen, as well as of the employes and Inspectors, is directed to the percentage of persons killed per one thousand employed. If all the persons interested in operating the mines would make the proper effort, a great reduction in fatalities might result during the coming year. The average number of lives lost in the anthracite region per one thousand employed inside, during the period named, was 4.

Table showing tons of coal produced per fatal accident inside of mines, and number of persons killed per each 1,000 employees, by companies, 1902-1906

Years	Names of Companies	Production in tons of 2,000 pounds	Fatal accidents inside of mines	Production per fatal accident inside	Number of employees inside	Number killed per 1,000 employed
1902	Philadelphia and Reading Coal and Iron Company.	6,210,055	45	138,001	16,933	2.66
1903		11,257,488	67	168,022	14,676	4.56
1904		11,381,911	69	164,955	16,056	4.30
1905		12,856,674	89	144,457	20,024	4.44
1906		11,452,702	66	173,525	18,810	3.51
		53,158,830	336	158,211	86,499	3.88
1902	Delaware, Lackawanna and Western Railroad Company.	4,939,028	18	274,390	9,555	1.88
1903		8,639,560	40	215,989	10,772	3.71
1904		8,766,895	43	203,881	10,475	4.10
1905		5,562,534	53	104,953	12,303	4.31
1906		9,094,114	53	171,587	12,821	4.13
		37,002,131	207	178,754	55,926	3.70
1902	Delaware and Hudson Company, .....	3,632,776	13	279,444	9,002	1.44
1903		6,965,458	39	178,601	10,386	3.75
1904		6,165,009	21	293,571	11,452	1.83
1905		6,644,527	54	123,046	11,006	4.90
1906		6,205,875	22	282,085	10,387	2.10
		29,613,645	149	198,749	52,233	2.85
1902	Lehigh Valley Coal Company, .....	2,828,838	16	176,802	6,144	2.60
1903		6,482,112	47	137,917	8,333	5.64
1904		6,294,291	65	96,835	9,349	6.95
1905		7,687,356	54	142,358	9,991	5.40
1906		6,059,876	54	112,219	9,334	5.73
		29,352,473	236	124,375	43,151	5.46
1902	Lehigh and Wilkes-Barre Coal Company, ..	2,281,951	13	175,534	5,729	2.27
1903		4,467,281	24	186,136	5,450	4.42
1904		4,311,768	32	134,742	5,623	5.69
1905		4,679,009	27	173,296	6,161	4.38
1906		4,277,585	29	147,503	6,257	4.63
		20,017,594	125	160,141	29,220	4.28
1902	Pennsylvania Coal Company, .....	1,542,286	5	308,457	5,125	.97
1903		3,572,199	28	127,578	5,715	4.90
1904		3,412,544	26	131,251	6,563	3.96
1905		3,770,483	26	145,018	7,260	3.58
1906		3,607,912	28	128,854	7,021	3.98
		15,905,424	113	140,756	31,684	3.56
1902	Susquehanna Coal Company, .....	1,825,433	9	202,826	5,234	1.72
1903		2,619,832	15	174,657	5,892	2.54
1904		2,784,929	15	185,662	5,050	2.97
1905		2,843,897	15	189,587	5,192	2.89
1906		3,042,423	29	104,911	5,074	5.71
		13,116,444	83	158,029	26,442	3.14
1902	Lehigh Coal and Navigation Company, ....	1,146,401	4	288,600	2,166	1.84
1903		2,267,392	11	206,126	2,471	4.45
1904		2,358,561	9	262,062	2,908	3.09
1905		2,770,788	13	212,137	3,167	4.10
1906		2,780,962	8	347,620	3,848	2.07
		11,324,104	45	251,646	14,560	3.09



Table showing tons of coal produced per fatal accident inside of mines, and number of persons killed per each 1,000 employees, by companies, 1902-1906—Continued.

Years	Names of Companies	Production in tons of 2,000 pounds	Fatal accidents inside of mines	Production per fatal accident inside	Number of employees inside	Number killed per 1,000 employed
1902	Scranton Coal Company, .....	1,651,686	6	275,281	3,778	1.59
1903		1,573,896	12	131,158	3,946	3.04
1904		2,691,577	15	179,438	4,455	3.37
1905		2,726,113	16	170,382	4,639	3.45
1906		2,336,193	16	146,012	4,573	3.50
		10,979,470	65	168,915	21,391	3.04
1902	Hillside Coal and Iron Company, .....	703,775	2	355,887	1,649	1.21
1903		1,896,337	14	135,452	2,674	5.23
1904		1,554,357	14	111,025	2,850	4.91
1905		1,755,441	12	146,287	2,701	4.44
1906		1,691,256	12	132,604	2,904	4.13
		7,501,166	54	138,910	12,778	4.22
1902	Coxe Brothers and Company, Incorporated,	681,145	5	116,229	1,191	4.20
1903		1,469,432	7	209,919	1,508	4.64
1904		1,392,562	9	198,993	1,606	5.61
1905		1,472,275	8	184,035	1,296	6.17
1906		1,359,883	1	1,359,883	1,426	.70
		6,375,690	30	212,523	7,026	4.27
1902	Kingston Coal Company, .....	710,456	9	78,940	1,471	6.12
1903		1,201,070	7	171,581	1,499	4.67
1904		1,289,398	5	257,880	1,658	3.02
1905		1,326,896	6	221,150	1,808	3.32
1906		1,339,353	8	167,419	1,775	4.51
		5,867,170	35	167,633	8,211	4.26
1902	Temple Iron Company, .....	970,528	9	107,836	2,413	3.73
1903		1,311,008	15	87,400	2,380	6.30
1904		1,339,722	15	89,315	2,447	6.13
1905		1,391,530	16	86,971	2,550	6.27
1906		822,563	5	164,513	1,919	2.60
		5,835,351	60	97,256	11,709	5.12
1902	G. B. Markle and Company, ..	533,349	3	177,783	1,705	1.77
1903		1,222,494	4	305,624	1,511	2.65
1904		1,267,416	5	241,483	1,474	3.39
1905		1,203,885	5	240,777	1,399	3.57
1906		958,274	7	136,896	1,147	6.10
		5,125,418	24	213,559	7,236	3.31
1902	Parrish Coal Company, .....	413,882	1	413,882	1,123	.89
1903		905,823	3	301,941	1,222	2.45
1904		775,259	6	129,209	1,290	4.65
1905		770,161	5	154,032	1,244	4.02
1906		579,381	13	44,568	956	13.60
		3,444,506	25	123,018	5,835	4.80
1902	Mineral Railroad and Mining Company, ....	479,207	14	34,229	1,592	8.79
1903		830,075	4	207,519	1,797	2.23
1904		649,785	1	649,785	1,719	.58
1905		653,978	11	59,453	1,489	7.39
1906		645,108	5	129,022	1,349	3.71
		3,258,153	35	93,090	7,946	4.40

Table showing tons of coal produced per fatal accident inside of mines, and number of persons killed per each 1,000 employees, by companies, 1902-1906  
Continued.

Years	Names of Companies	Production in tons of 2,000 pounds	Fatal accidents inside of mines	Production per fatal accident inside	Number of employees inside	Number killed per 1,000 employed
1902	St. Clair Coal Company, .....	354,597	2	177,299	259	7.72
1903		526,163	1	526,163	344	2.91
1904		477,570	1	477,570	419	2.39
1905		564,928	4	141,232	490	8.16
1906		565,983	2	282,992	502	3.98
		2,489,241	10	248,924	2,014	4.97
1902	Price Pancoast Coal Company, .....	392,507	2	196,254	655	3.05
1903		550,701	1	550,701	707	1.41
1904		240,504	1	240,504	717	1.39
1905		608,945	6	101,491	1,070	5.61
1906		674,422	5	134,884	1,069	4.68
		2,467,079	15	164,472	4,218	3.55
1902	Mill Creek Coal Company, .....	310,170	1	310,170	473	2.11
1903		530,455	1	530,455	529	1.89
1904		519,729	4	129,932	624	6.41
1905		572,534	7	81,762	624	11.22
1906		486,832	7	69,547	615	11.38
		2,419,520	20	120,976	2,865	6.98
1902	A. Pardee and Company, .....	195,492	2	97,746	726	2.75
1903		536,643	2	268,322	756	2.65
1904		559,567	5	111,913	807	6.20
1905		573,427	5	114,685	819	6.11
1906		522,826	4	130,707	882	4.54
		2,387,955	18	132,664	3,990	4.51
1902	Pardee Brothers and Company, .....	221,359	2	110,680	331	6.04
1903		350,895	2	190,448	384	5.21
1904		503,835	5	100,767	551	9.07
1905		569,095	2	284,548	700	2.85
1906		546,750	1	545,750	707	1.41
		2,220,934	12	185,078	2,673	4.49

The table herewith shows by counties the causes of fatal accidents, the production and the percentage of inside employees killed per one thousand employed, for the years 1902 to 1906, inclusive.

Anthracite coal is mined in 10 counties, and the production for the past year ranged from 63,700 tons to 23,700,000 tons in the different counties. Luzerne and Lackawanna counties are the largest producers, while Sullivan and Wayne are the smallest.

More lives were lost in Sullivan per one thousand employed, than in any other county. The following counties, in the order named, show the next highest number of fatalities: Susquehanna, Luzerne, Schuylkill, Columbia, Dauphin, Northumberland, Lackawanna and Carbon. The large number of accidents by falls accounts for the high percentage in the counties of Sullivan and Susquehanna. In Luzerne the high percentage is due to accidents in the shafts, by which 20 employees were killed, and to explosions of gas and dynamite, by which 10 employees were killed.

Table showing causes of fatal accidents inside the mines; average production per accident, and percentage of employees killed, by counties, 1902-1906

Years	County	Number of mines	Number of inside employees	Production in tons	Fatal accidents by explosions of gas	Fatal accidents by falls	Total fatal accidents in-	Production in tons per fatal accident inside	Percentage killed per 1,000 employees
1902	Luzerne,	229	26,024	12,730,296	7	36	83	137,100	3.57
1903		333	38,370	23,956,481	15	75	169	141,577	4.40
1904		266	43,663	23,453,279	8	106	200	119,616	4.39
1905		254	43,101	21,187,313	14	122	213	117,150	4.39
1906		271	41,663	25,700,886	27	81	194	122,479	4.06
		.....	192,741	109,548,255	71	423	871	125,772	4.52
1902	Lackawanna,	118	25,931	8,613,772	.....	23	43	200,320	1.66
1903		111	27,745	16,480,042	3	59	107	154,019	3.83
1904		115	30,600	15,231,162	7	62	115	132,534	3.76
1905		123	30,823	15,907,677	2	82	127	125,966	4.12
1906		157	31,196	16,821,959	4	70	112	150,196	3.59
		.....	146,325	73,154,832	16	296	504	145,148	3.44
1902	Schuylkill,	76	20,876	7,041,281	3	37	60	117,355	2.87
1903		76	20,144	13,033,624	6	44	88	154,927	4.37
1904		106	22,272	14,052,467	8	43	107	131,331	4.80
1905		132	25,716	15,481,627	11	60	136	113,835	5.29
1906		153	25,365	14,621,909	7	82	94	155,552	3.70
		.....	114,373	64,830,968	35	216	485	135,672	4.24
1902	Northumberland,	38	9,670	2,789,517	10	10	34	84,397	3.52
1903		26	9,312	4,910,105	2	21	33	105,480	3.06
1904		52	9,248	4,751,836	6	13	39	122,488	4.92
1905		54	9,823	4,767,222	5	21	42	143,292	4.28
1906		70	9,585	4,792,408	3	17	32	149,762	3.34
		.....	47,628	22,080,198	26	84	182	121,319	3.82

Table showing causes of fatal accidents inside the mines; average production per accident, and percentage of employees killed, by counties, 1902-1906—Continued.

Years	County	Number of mines	Number of inside employees	Production in tons	Fatal accidents by explosions of gas	Fatal accidents by falls	Total fatal accidents in-side	Production in tons per fatal accident inside	Percentage killed per 1,000 employees
1902	Carbon,	10	2,222	939,220	.....	1	4	234,805	1.80
1903		15	2,120	1,905,033	.....	.....	13	146,511	6.13
1904		20	2,381	2,012,064	.....	2	7	287,433	2.94
1905		23	2,400	2,211,077	.....	.....	9	245,675	3.66
1906		25	2,740	2,006,052	1	2	6	334,348	2.19
.....		.....	11,923	9,073,486	1	7	33	232,653	3.27
1902	Columbia,	6	1,438	206,134	.....	.....	3	68,711	2.08
1903		5	1,454	1,508,843	.....	.....	3	402,948	2.06
1904		10	1,419	1,028,236	.....	7	10	102,824	7.04
1905		9	1,567	1,697,944	.....	2	7	156,849	4.47
1906		7	1,403	865,237	1	3	7	123,605	4.99
.....		.....	7,281	4,406,394	1	12	30	146,880	4.12
1902	Dauphin,	2	1,190	877,983	.....	.....	1	377,983	.88
1903		2	1,355	634,436	.....	.....	1	130,887	3.98
1904		9	1,279	645,646	1	3	4	158,138	8.67
1905		10	1,350	645,648	1	.....	1	118,163	3.70
1906		10	1,422	656,003	.....	3	3	218,667	2.11
.....		.....	6,417	2,979,977	2	7	25	119,199	3.89
1902	Susquehanna,	3	1,086	404,248	.....	2	2	292,124	1.84
1903		3	1,064	714,976	.....	4	6	119,163	5.64
1904		2	1,002	618,250	.....	2	6	103,042	5.99
1905		2	1,026	607,273	.....	.....	6	101,212	5.85
1906		3	1,028	501,877	.....	2	6	83,646	5.83
.....		.....	5,206	2,846,624	.....	16	26	109,435	4.99



1902	{ Sullivan, .....	3	523	365,194	.....	3	5	73,039	9.56
1903		3	455	262,002	.....	2	2	131,001	4.40
1904		3	443	262,772	.....	1	1	262,772	2.26
1905		4	331	277,229	.....	1	2	138,614	6.04
1906		4	414	320,203	.....	1	2	160,101	4.83
.....		.....	2,165	1,487,400	.....	8	12	123,950	5.54
1902	{ Wayne, .....	1	175	61,513	.....	.....	.....	.....	.....
1903		1	135	68,132	.....	.....	.....	.....	.....
1904		1	136	59,329	.....	.....	.....	.....	.....
1905		3	202	63,733	.....	.....	.....	.....	.....
1906		.....	588	273,247	.....	.....	.....	.....	.....

\*Williamstown disaster.

The table herewith shows by counties and districts the chief causes of fatal accidents in the anthracite mines during the year. The most prolific causes were falls, cars, explosions of gas and electricity, in the order named

Districts	Names of Counties or Parts of Counties in Each District	Accidents by falls	Percentage of accidents inside by falls	Accidents by explosions of gas and dust	Accidents by cars inside	Accidents by electricity inside
First, .....	Lackawanna, Susquehanna Wayne, .....	11	57.89	.....	5	.....
Second, .....	Lackawanna, .....	14	63.63	1	3	.....
Third, .....	Lackawanna, .....	13	43.33	.....	5	.....
Fourth, .....	Lackawanna, .....	25	69.45	3	2	.....
Fifth, .....	Lackawanna, Luzerne, Sullivan, .....	23	79.30	.....	2	.....
Sixth, .....	Luzerne, .....	14	50.00	2	3	.....
Seventh, .....	Luzerne, .....	15	48.38	3	5	.....
Eighth, .....	Luzerne, .....	13	52.00	1	5	.....
Ninth, .....	Luzerne, .....	9	23.69	9	9	.....
Tenth, .....	Luzerne, .....	12	37.50	12	4	1
Eleventh, .....	Luzerne, Carbon, .....	10	33.33	1	4	.....
Twelfth, .....	Schuylkill .....	10	45.44	1	4	.....
Thirteenth, .....	Schuylkill, .....	10	41.67	1	3	.....
Fourteenth, .....	Schuylkill, Columbia, .....	6	54.55	1	1	.....
Fifteenth, .....	Northumberland, .....	6	40.01	2	2	.....
Sixteenth, .....	Northumberland, .....	11	64.71	1	4	.....
Seventeenth, .....	* .....	.....	.....	.....	.....	.....
Eighteenth, .....	Schuylkill, .....	3	14.28	5	3	.....
Nineteenth, .....	Schuylkill, .....	3	23.07	.....	1	.....
Twentieth, .....	Dauphin, Schuylkill, .....	6	46.15	.....	2	.....
		214	.....	43	67	1

\*Included in Eleventh and Eighteenth districts.

Table showing nationality of employees killed by falls in the Anthracite Region, 1906

Nationality	Districts																			Total	
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	*Seventeenth	Eighteenth	Nineteenth		Twentieth
American, .....	.....	.....	.....	.....	5	4	2	.....	.....	3	.....	.....	1	3	2	1	.....	1	1	3	30
English, .....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	9
Welsh, .....	.....	1	.....	4	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Scott, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Irish, .....	1	.....	.....	.....	2	.....	.....	.....	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
German, .....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Polish, .....	7	3	4	8	10	2	5	5	5	6	2	4	3	.....	3	5	.....	1	.....	4	74
Hungarian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Italian, .....	1	4	.....	1	4	5	.....	.....	.....	1	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Slavonian, .....	.....	.....	.....	.....	.....	1	1	1	.....	2	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....
Lithuanian, .....	1	4	5	1	.....	1	3	3	1	.....	.....	5	4	.....	.....	.....	.....	1	.....	.....	.....
Austrian, .....	.....	2	1	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Russian, .....	1	.....	1	1	1	.....	3	.....	.....	.....	1	.....	1	.....	.....	3	.....	.....	.....	.....	.....
Totals, .....	11	14	13	25	23	14	15	13	9	12	10	19	10	6	6	11	.....	3	3	6	214

\*Included in Eleventh and Eighteenth districts.

Number of employees inside and outside the mines; number of fatal accidents; number of fatal accidents per 1,000 employees; number of tons of coal mined per fatal accident inside, 1881 to 1906 inclusive

Years	Number of employees inside of mines	Number of fatal accidents inside	Number of lives lost inside per 1,000 employed	Production of coal in tons of 2,000 pounds for each life lost inside	Number of employees outside of mines	Number of fatal accidents outside	Number of lives lost outside per 1,000 employed	Number of lives lost inside and outside per 1,000 employed
1881, .....	45,619	234	5.13	146,165	30,412	39	1.23	3.53
1882, .....	50,764	250	4.92	140,230	31,436	41	1.30	3.54
1883, .....	56,268	274	4.87	137,764	35,153	49	1.39	3.53
1884, .....	61,922	286	4.62	127,513	39,151	46	1.17	3.28
1885, .....	62,901	290	4.61	131,834	37,419	42	1.12	3.31
1886, .....	63,930	236	3.69	165,046	39,114	43	1.10	2.71
1887, .....	67,716	270	3.99	156,153	38,801	46	1.19	2.97
1888, .....	78,688	317	4.03	147,114	43,530	47	1.08	2.98
1889, .....	74,173	339	4.57	128,763	45,486	58	1.23	3.32
1890, .....	73,613	323	4.39	139,276	46,306	55	1.19	3.15
1891, .....	76,569	372	4.86	133,606	46,739	56	1.20	3.47
1892, .....	82,088	361	4.40	141,903	48,212	57	1.18	3.21
1893, .....	86,387	383	4.49	136,188	51,682	68	1.32	3.30
1894, .....	87,901	368	4.19	138,497	52,038	78	1.50	3.19
1895, .....	89,251	354	3.97	160,872	54,454	67	1.23	2.93
1896, .....	94,798	430	4.54	125,217	55,290	72	1.30	3.34
1897, .....	95,812	372	3.88	141,347	53,745	51	.95	2.83
1898, .....	91,171	360	3.95	146,674	51,249	51	.99	2.89
1899, .....	92,167	389	4.22	155,574	48,437	72	1.49	3.28
1900, .....	94,140	353	3.80	160,233	49,634	53	1.07	2.86
1901, .....	98,434	441	4.48	152,142	49,217	72	1.46	3.47
1902, .....	98,377	245	*2.49	168,730	49,762	55	1.11	2.03
1903, .....	102,055	426	4.17	176,602	49,772	92	1.85	3.41
1904, .....	110,362	496	4.49	148,376	50,968	99	1.94	3.69
1905, .....	116,371	551	4.73	142,735	51,883	93	1.79	3.83
1906, .....	114,998	456	3.97	141,250	51,177	101	1.98	3.35

\*Year of the big strike, when an average of only 116 days was worked by the collieries.



Number of mines and miners' laborers employed in the mines; number killed and ratio of each class killed per 1,000 employed; average number of days worked by breakers; average production per day worked by breakers, 1881 to 1906 inclusive

Years	Number of miners employed	Number of miners killed	Number of miners killed per 1,000 employed	Number of miners' laborers employed	Number of miners' laborers killed	Number of miners' laborers killed per 1,000 employed	Average number of days worked by breakers	Average production per day worked by breakers, gross tons
1881, .....	22,809	114	4.99	16,726	70	4.19	221	138,181
1882, .....	22,843	135	5.91	15,229	56	3.68	218	143,584
1883, .....	25,310	133	5.37	16,879	67	3.97	232	145,272
1884, .....	27,100	132	4.87	19,606	81	4.13	192	169,590
1885, .....	28,305	160	5.65	20,128	88	4.27	204	167,331
1886, .....	25,970	131	5.04	17,068	68	3.93	196	177,487
1887, .....	29,558	162	5.45	17,548	57	3.25	208	180,981
1888, .....	34,547	169	4.89	21,952	87	3.96	218	191,002
1889, .....	30,504	194	6.36	19,368	79	4.08	197	197,837
1890, .....	28,836	146	5.05	18,620	95	5.10	210	191,268
1891, .....	30,552	180	5.89	19,590	119	6.07	213	208,339
1892, .....	30,779	180	5.84	22,110	111	5.02	202	226,428
1893, .....	32,881	195	5.93	22,853	108	4.73	202	233,562
1894, .....	33,357	218	6.54	23,942	91	3.80	175	260,035
1895, .....	34,553	179	5.18	24,628	115	4.67	187	271,909
1896, .....	37,603	204	5.51	26,350	134	5.09	170	282,790
1897, .....	36,932	210	5.69	27,277	99	3.63	151	310,310
1898, .....	36,377	176	4.84	24,060	124	5.15	151	312,220
1899, .....	36,421	199	5.46	23,946	114	4.75	179	301,867
1900, .....	36,832	184	4.99	24,613	95	3.86	176	291,007
1901, .....	37,804	224	5.92	26,265	122	4.64	195	307,210
1902, .....	36,392	114	3.13	25,443	62	2.44	*116	†318,203
1903, .....	36,823	202	5.49	27,533	110	4.00	211	318,350
1904, .....	39,848	233	5.85	31,217	145	4.64	213	308,494
1905, .....	42,078	308	7.32	31,967	148	4.63	208	337,599
1906, .....	41,801	226	5.41	29,652	133	4.48	206	312,671

\*Strike during the year.

†Washeries worked during the strike. The time was not computed in the average days worked.

TABLE AA.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Districts	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in gross tons	Average number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
First, .....	2,954,789	263,133	35,284	3,253,206	195	8,512	23	49	104,793	179,844	743
Second, .....	3,233,766	327,324	33,914	3,595,034	189	9,632	25	31	147,760	213,936	897
Third, .....	3,784,221	430,655	136,450	4,350,726	191	10,132	22	64	173,891	268,318	1,062
Fourth, .....	4,613,269	169,438	164,997	4,947,734	197	10,811	40	78	173,102	114,617	1,872
Fifth, .....	2,517,481	196,568	44,525	2,761,574	141	9,401	34	62	110,016	132,262	1,872
Sixth, .....	2,791,484	225,263	31,364	3,046,111	165	8,926	38	81	122,404	230,482	1,012
Seventh, .....	3,141,186	333,040	183,219	3,722,445	185	8,926	37	100	111,092	411,135	1,012
Eighth, .....	3,015,177	353,988	98,348	3,467,513	198	8,931	32	90	106,103	682,038	1,063
Ninth, .....	4,111,564	401,761	63,176	4,576,441	206	9,006	39	65	98,883	294,586	1,156
Tenth, .....	3,204,811	394,618	145,993	3,613,985	217	8,997	38	74	73,822	1,709,469	1,704
Eleventh, .....	5,234,538	759,410	145,993	6,139,951	203	14,677	41	120	72,326	325,166	675
Twelfth, .....	7,688,886	321,601	42,310	8,052,797	236	8,080	25	20	40,179	391,464	631
Thirteenth, .....	1,631,883	368,727	52,664	2,052,274	228	5,517	18	32	12,839	593,158	712
Fourteenth, .....	1,531,383	243,686	35,345	2,210,414	217	5,517	18	32	45,850	522,278	789
Fifteenth, .....	2,045,926	228,584	38,226	2,312,746	254	7,447	21	20	50,519	223,721	1,001
Sixteenth, .....	2,114,354	235,667	69,041	2,419,062	233	7,283	21	95	35,145	810,019	600
Seventeenth,* .....	2,879,466	391,857	73,163	3,344,486	208	9,573	28	79	22,520	544,610	557
Eighteenth, .....	1,612,768	346,001	29,465	2,288,264	210	7,128	22	44	24,700	247,752	
Nineteenth, .....	1,826,728	346,170	32,291	2,204,192	255	5,891	16	60			
Twentieth, .....											
Totals 1906, .....	56,624,082	6,426,911	1,359,234	64,410,227	206	168,175	557	1,212	1,614,683	7,980,733	16,972
Totals 1905, .....	62,441,134	6,359,280	1,620,140	70,420,554	208	168,254	541	1,289	1,302,820	8,353,394	17,500
Totals 1904, .....	58,138,288	6,171,748	1,379,293	65,709,329	212	161,309	595	1,325	1,191,192	6,519,312	17,085
Totals 1903, .....	60,231,104	5,710,341	1,290,566	67,111,951	211	151,827	538	1,325	1,701,176	5,317,422	16,872
Totals 1902, .....	31,551,813	4,424,779	934,957	36,911,549	116	148,141	300	1,311	2,430,965	2,130,965	16,189
Totals 1901, .....	53,447,912	5,270,375	1,178,674	59,905,951	195	147,651	513	1,243	1,536,894	4,155,685	16,169
Totals 1900, .....	45,271,608	4,890,932	1,064,778	51,217,318	171	142,826	411	1,057	1,237,180	3,454,641	15,168

\*No inspector; included in Eleventh and Eighteenth districts.

TABLE AA.—Continued

Districts	Number of Boilers				Locomotives			Total horse power	Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
	Cylindrical	Horse power	Tubular	Horse power	Steam	Air	Electric								
First, .....	76	2,562	101	12,355	17	10	27	14,947	182	23,027	61	53,689	24,230	11	8
Second, .....	76	2,706	98	15,730	33	8	20	18,436	244	19,184	54	43,924	23,394	19	15
Third, .....	121	6,818	87	15,712	7	22	21	22,560	372	26,010	53	38,239	24,361	12	13
Fourth, .....	52	3,120	76	16,134	13	.....	40	19,257	302	13,482	50	46,579	21,416	18	6
Fifth, .....	0	1,310	169	16,614	18	10	16	18,124	284	14,171	52	48,311	25,768	5	7
Sixth, .....	20	1,093	108	20,477	25	2	16	24,416	413	23,061	38	11,825	21,825	4	16
Seventh, .....	46	1,595	137	22,815	12	3	13	24,350	291	25,434	43	44,570	25,593	8	17
Eighth, .....	172	5,341	106	18,993	6	3	13	24,473	454	27,889	29	29,579	17,693	10	12
Ninth, .....	42	1,730	111	22,583	24	3	17	24,103	253	26,110	27	25,467	14,453	5	18
Tenth, .....	224	5,878	148	20,320	124	13	10	29,681	647	54,595	117	130,286	67,932	12	26
Eleventh, .....	12	5,360	185	20,330	11	12	4	29,684	171	28,382	29	48,390	11,300	11	11
Twelfth, .....	7	335	187	25,310	25	16	.....	25,645	275	38,467	36	43,896	15,690	2	12
Thirteenth, .....	39	1,455	96	14,760	8	2	3	16,215	149	18,792	17	26,777	22,709	1	3
Fourteenth, .....	26	1,760	129	20,631	14	3	3	21,391	212	25,504	43	36,933	21,284	3	7
Fifteenth, .....	26	800	136	17,155	18	.....	.....	17,955	183	21,903	55	38,202	24,768	4	10
Sixteenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seventeenth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eighteenth, .....	168	6,358	292	36,853	27	5	.....	43,211	343	28,193	62	66,236	34,407	1	8
Nineteenth, .....	113	4,230	169	26,185	18	.....	8	30,415	256	33,332	48	31,771	20,065	3	14
Twentieth, .....	116	4,500	169	21,192	18	.....	11	25,692	133	21,790	30	30,107	16,653	8	6
Totals, .....	1,465	52,729	2,662	427,396	445	108	223	480,125	5,673	525,474	894	851,154	446,872	135	237







TABLE C.—Causes of non-fatal accidents in and about the mines, and number attributable to each cause

	Districts																				Total	Percentages	
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	*Seventeenth	Eighteenth	Nineteenth	Twentieth			
Causes of Accidents Inside																							
Falls of coal, slate and roof, .....	23	11	15	27	19	13	19	17	8	22	29	9	15	7	2	32	19	7	23	314	31.31		
Mine cars, .....	14	6	15	19	14	8	8	21	14	15	13	1	3	4	4	16	13	4	8	217	21.63		
Explosions of gas and dust, .....	1	2	7	4	8	22	19	16	29	4	16	5	11	5	1	16	13	11	6	195	19.44		
Explosions of powder and dynamite, .....	5	5	8	8	7	3	6	11	1	5	12	1	3	3	2	9	7	7	1	49	4.89		
Preparatory blasts, .....	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	8	1	102	10.17		
Falling into shafts, slopes, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	25	2.49		
Crushed at batteries, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	1.99		
Kicked by mules, etc., .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	.80		
Suffocation by gas or otherwise, .....	1	1	6	5	1	10	6	2	4	6	9	2	3	1	3	1	4	2	5	71	7.08		
Machinery, .....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	.20		
Miscellaneous, .....	2	1	6	5	1	10	6	2	4	6	9	2	3	1	3	1	4	2	5	71	7.08		
Totals, .....	44	26	54	70	51	60	88	77	59	58	95	18	38	23	14	79	65	33	51	1,063	100.00		
Causes of Accidents Outside																							
Cars, .....	3	2	7	1	7	4	4	3	3	7	8	...	1	1	2	4	...	3	5	4	69	33.01	
Machinery, .....	1	1	1	1	1	3	3	4	...	5	6	1	2	5	3	4	...	2	1	...	47	22.49	
Suffocation in chutes, etc., .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Boiler explosions, .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Miscellaneous, .....	1	2	2	2	3	14	5	6	3	4	11	1	6	4	1	1	...	9	5	5	92	41.02	
Totals, .....	5	5	10	8	11	21	12	13	6	16	25	2	9	10	8	16	...	14	11	9	299	100.00	
Grand totals inside and outside, .....	49	31	64	78	62	81	100	90	65	74	120	20	47	33	20	95	...	79	44	60	1,212	...	

\*Included in Eleventh and Eighteenth districts.

TABLE D.—Number of gaseous and non-gaseous mines, number of foremen, assistants and fire bosses, production of coal from gaseous and non-gaseous mines and washeries, and percentage of production from each

Districts	Number of gaseous mines	Number of foremen and assistant foremen in gaseous mines	Number of fire bosses	Number of non-gaseous mines	Number of foremen and assistant foremen in non-gaseous mines	Production in tons from gaseous mines	Production in tons from non-gaseous mines	Production in tons from washeries	Percentage of production from gaseous mines	Percentage of production from non-gaseous mines	Percentage of production from washeries
First, .....	1	2	1	53	44	82,003	2,832,067	318,536	2.52	87.69	9.79
Second, .....	13	34	25	10	8	2,545,431	993,531	53,072	70.89	27.63	1.48
Third, .....	19	30	68	9	9	3,201,632	486,173	682,891	73.59	11.17	15.24
Fourth, .....	17	32	52	10	3	3,730,987	214,900	1,011,755	75.20	4.35	20.45
Fifth, .....	23	28	33	25	17	1,059,781	987,080	104,713	60.47	35.74	3.79
Sixth, .....	19	35	34	13	10	2,097,795	887,478	251,838	68.87	22.86	8.27
Seventh, .....	34	34	30	4	4	3,206,209	177,295	338,941	86.13	4.76	9.11
Eighth, .....	18	30	42	8	9	2,909,602	408,939	140,072	83.91	11.79	4.30
Ninth, .....	19	33	69	3	1	4,074,560	52,761	419,130	89.03	1.15	9.82
Tenth, .....	27	26	60	12	8	3,080,748	511,301	21,936	85.24	14.15	.61
Eleventh, .....	39	47	57	79	72	3,334,347	2,805,604	54.31	99.90	45.69	.....
Twelfth, .....	13	19	63	1	1	3,049,836	2,961	.....	99.90	.10	.....
Thirteenth, .....	16	26	68	2	3	2,696,797	119,532	236,647	88.33	3.82	7.75
Fourteenth, .....	20	20	44	1	.....	2,165,031	4,197	41,206	97.95	.19	1.86
Fifteenth, .....	4	12	56	20	22	1,088,113	1,224,633	.....	47.05	52.95	.....
Sixteenth, .....	21	19	63	19	15	1,445,609	977,469	56,684	58.29	39.42	2.29
Seventeenth,* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eighteenth, .....	28	27	60	20	13	2,593,835	676,728	63,923	77.79	20.30	1.91
Nineteenth, .....	32	21	58	16	8	1,938,856	116,710	213,698	85.61	9.06	9.33
Twentieth, .....	19	23	50	2	2	1,640,763	179,903	383,460	74.44	8.16	17.40
Totals and percentages, .....	383	500	983	305	249	45,564,761	13,488,014	4,357,502	72.29	20.94	6.77

\*Included in Eleventh and Eleventh districts.

TABLE E.—Quantity of coal produced by each company that produced 500,000 or more tons, and the number of persons employed

Names of Companies	Number of Inspection Districts	Production of coal in tons	Employees
Philadelphia and Reading Coal and Iron Co., .....	Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Eighteenth, Nineteenth, Twentieth, .....	10,225,627	29,904
Delaware, Lackawanna and Western Railroad Co., .....	Second, Third, Fourth, Eighth, Ninth, Tenth, .....	8,119,745	16,634
Delaware and Hudson Co., .....	First, Second, Third, Fourth, Sixth, Seventh, Ninth, .....	16,634	13,790
Lehigh Valley Coal Co., .....	Fifth, Sixth, Seventh, Eighth, Tenth, Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, Twentieth, .....	5,540,960	13,597
Lehigh and Wilkes-Barre Coal Co., .....	Seventh, Ninth, Tenth, Eighth, .....	5,410,604	8,332
Pennsylvania Coal Co., .....	Second, Ninth, Tenth, Sixth, .....	3,819,273	9,248
Susquehanna Coal Co., .....	Tenth, Thirteenth, Fifteenth, Sixteenth, .....	3,221,350	7,712
Lehigh Coal and Navigation Co., .....	Tenth, Thirteenth, Fifteenth, Sixteenth, .....	2,716,449	5,703
Scranton Coal Co., .....	Eleventh, Eighteenth, .....	2,433,092	6,322
Hillside Coal and Iron Co., .....	First, Second, Third, Fourth, .....	2,085,887	3,974
Coxe Brothers and Co., Incorporated, .....	First, Fifth, Sixth, .....	1,420,765	2,357
Kingston Coal Co., .....	Eleventh, Eighteenth, .....	1,214,181	2,569
G. E. Markle and Co., .....	Eighth, Ninth, .....	1,195,831	2,569
Temple Iron Co., .....	Eleventh, .....	855,692	1,575
Price-Pancoast Coal Co., .....	Third, .....	734,451	2,372
Mineral Railroad and Mining Co., .....	Third, .....	692,463	1,351
Harrison Coal Co., .....	Sixteenth, .....	577,305	1,351
St. Clair Coal Co., .....	Ninth, .....	517,305	1,351
Totals, .....	Nineteenth, .....	506,342	836
		51,244,527	129,472

The 18 companies named in this table, out of 185 companies in the region, produced 51,244,527 tons, or 80 per cent. of the total output, 64,410,277 tons.



TABLE F.—Classification of employes killed or fatally injured in and about the mines, 1877 to 1906 inclusive

Years															
	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891
Inside Employes															
Mine foremen and assistants, .....	1	2	2	3	.....	3	2	1	.....	2	1	1	4	1	.....
Fire bosses and assistants, .....	.....	4	2	.....	5	5	1	1	3	2	5	2	2	5	6
Miners, .....	119	94	141	83	114	135	136	132	160	131	102	169	194	146	180
Miners' laborers, .....	32	28	37	33	70	56	67	81	86	68	87	87	79	95	119
Drivers and runners, .....	9	11	22	18	24	28	47	28	16	18	23	33	39	37	38
Doorboys, etc., .....	4	3	6	.....	14	9	18	13	6	6	10	9	10	8	7
All others, .....	11	21	22	31	4	14	3	30	19	9	72	16	11	31	22
Totals, .....	176	163	232	186	234	250	274	286	290	236	270	317	339	323	372
Outside Employes															
Foremen, .....	1	.....	2	.....	.....	.....	.....	.....	.....	1	3	.....	1	1	.....
Blacksmiths and carpenters, .....	.....	.....	.....	.....	.....	.....	7	4	6	1	1	1	1	13	2
Engineers and firemen, .....	.....	1	2	2	2	2	11	9	7	6	3	3	3	8	3
Slate pickers, .....	5	6	9	6	10	11	7	12	13	9	9	6	10	12	11
All others, .....	12	17	17	8	27	23	24	21	16	26	28	37	37	21	40
Totals, .....	18	24	30	16	39	41	49	46	42	43	46	47	58	55	56
Grand totals inside and outside, .....	194	187	262	202	273	291	323	332	332	279	316	364	397	378	428

TABLE F.—Continued

Years															
1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1902	1906
Inside Employees															
Mine foremen and assistants, .....	1	3	3	2	5	.....	2	5	3	3	5	1	3	2	2
Fire bosses and assistants, .....	2	4	1	2	2	.....	2	4	2	4	1	1	1	2	6
Miners, .....	226	303	233	202	224	184	159	176	210	204	179	218	195	190	296
Miners' laborers, .....	148	145	110	110	122	95	114	124	99	134	115	91	108	111	332
Drivers and runners, .....	31	31	46	46	31	33	39	33	26	46	33	38	47	39	33
Doorboys, etc., .....	9	14	12	5	8	18	6	7	4	10	7	5	12	8	32
All others, .....	48	47	63	51	32	33	15	12	28	29	14	15	22	16	48
Totals, .....	456	551	496	426	245	441	389	360	372	430	354	368	388	361	456
Outside Employees															
Foremen, .....	2	1	1	1	.....	.....	1	.....	.....	3	3	.....	2	1	2
Blacksmiths and carpenters, .....	5	5	5	4	.....	.....	2	.....	4	4	4	4	2	4	5
Engineers and firemen, .....	6	6	6	7	5	2	6	13	2	13	13	12	11	7	14
Slate pickers, .....	3	3	11	9	9	9	53	33	6	53	47	62	53	45	77
All others, .....	77	58	79	72	34	58	72	51	39	72	67	78	68	57	101
Totals, .....	101	93	99	92	55	72	72	51	51	72	67	78	68	57	101
Grand totals inside and outside, .....	557	644	595	518	300	513	461	411	423	502	421	446	456	418	557

TABLE G.—Number and causes of fatal accidents in and about the mines, 1870 to 1906 inclusive

	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887
<b>Inside</b>																		
By falls of coal, .....	41	48	61	73	52	57	52	72	45	75	50	57	73	58	74	65	67	74
By falls of slate and roof, .....	19	16	33	31	41	37	40	44	32	53	34	36	53	66	61	62	61	75
By mine cars, .....	20	27	21	27	32	25	29	15	23	37	36	38	48	62	61	35	35	49
By explosions of gas and dust, .....	17	28	30	27	27	19	29	16	21	29	23	33	23	32	19	25	24	19
By explosions of powder and dynamite, .....	15	6	4	2	5	10	14	3	16	11	2	3	12	11	5	13	7	7
By explosions of blasts, etc., .....	12	12	12	17	11	13	15	8	13	6	7	14	12	23	29	18	18	14
By falling into shafts, .....	13	3	10	11	5	12	15	1	1	3	5	5	8	14	11	11	6	9
By falling into slopes, .....	10	3	3	3	1	1	4	1	1	1	2	1	4	.....	5	11	3	1
By falling down manways, etc., .....	2	2	.....	2	.....	2	.....	.....	2	3	2	1	1	.....	.....	.....	.....	.....
Crushed at batteries, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
By mules, .....	2	2	.....	3	4	.....	2	3	1	6	1	1	1	.....	2	.....	.....	.....
By suffocation, .....	24	24	2	2	9	5	4	2	2	1	1	3	4	.....	.....	.....	.....	.....
By suffocation, .....	35	17	17	26	29	20	19	11	6	7	11	14	15	13	19	40	16	22
Miscellaneous causes, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Totals, .....</b>	<b>184</b>	<b>188</b>	<b>198</b>	<b>226</b>	<b>212</b>	<b>204</b>	<b>213</b>	<b>176</b>	<b>163</b>	<b>232</b>	<b>186</b>	<b>234</b>	<b>250</b>	<b>274</b>	<b>286</b>	<b>290</b>	<b>286</b>	<b>270</b>
<b>Outside</b>																		
By cars, .....	4	4	9	17	4	6	6	5	7	14	2	16	18	24	16	19	12	17
By machinery, .....	4	9	8	6	5	13	5	4	6	6	5	14	9	12	13	9	11	11
By suffocation, .....	1	2	1	1	1	2	1	2	2	1	1	3	2	4	3	7	5	1
By boiler explosions, .....	11	1	.....	14	5	3	1	7	8	9	8	6	12	9	14	7	15	17
Miscellaneous causes, .....	7	6	7	14	5	10	2	7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Totals, .....</b>	<b>27</b>	<b>22</b>	<b>25</b>	<b>38</b>	<b>19</b>	<b>34</b>	<b>15</b>	<b>18</b>	<b>24</b>	<b>30</b>	<b>16</b>	<b>39</b>	<b>41</b>	<b>49</b>	<b>46</b>	<b>42</b>	<b>43</b>	<b>46</b>
<b>Grand totals inside and outside, .....</b>	<b>211</b>	<b>210</b>	<b>223</b>	<b>264</b>	<b>231</b>	<b>238</b>	<b>228</b>	<b>194</b>	<b>187</b>	<b>262</b>	<b>202</b>	<b>273</b>	<b>291</b>	<b>323</b>	<b>332</b>	<b>332</b>	<b>279</b>	<b>316</b>

\*Nanticoke disaster; 26 persons were entombed by an inrush of quicksand.

TABLE G.—Continued

	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
<b>Inside</b>																			
By falls of coal, .....	85	81	67	75	88	80	83	66	68	84	58	78	61	66	40	61	82	76	60
By falls of slate and roof, .....	89	100	70	97	104	100	104	123	*187	120	128	148	114	160	76	149	156	219	154
By mine cars, .....	58	58	56	59	57	74	53	52	49	40	44	51	60	69	42	70	71	82	67
By explosions of gas and dust, .....	20	29	60	39	57	45	29	31	41	36	33	28	38	33	20	26	30	33	43
By explosions of powder and dynamite, .....	11	10	3	13	7	11	13	24	9	10	11	11	14	15	19	17	35	16	28
By explosions of blasts, etc., .....	24	24	16	33	29	30	23	27	28	38	24	27	29	38	13	38	34	44	53
By falling into shafts, .....	9	3	17	11	6	7	13	7	13	8	7	6	13	15	6	19	14	24	11
By falling down slopes, .....	3	5	8	6	1	2	5	4	3	3	4	4	2	5	3	6	5	19	3
By falling down manways, etc., .....	.....	.....	.....	1	7	4	1	4	2	5	4	7	2	4	4	6	7	.....	6
Crushed at batteries, .....	.....	.....	.....	2	.....	1	1	3	2	1	.....	8	.....	1	.....	.....	3	3	2
By mules, .....	.....	.....	.....	4	2	7	4	5	6	.....	8	8	.....	.....	2	6	6	6	2
By suffocation, .....	.....	.....	.....	17	1	17	26	3	9	20	16	5	11	5	3	6	20	10	7
Miscellaneous causes, .....	18	29	26	15	2	10	3	2	7	7	23	15	12	32	17	22	133	23	19
Totals, .....	317	339	323	372	361	388	368	354	430	372	360	339	358	441	245	426	496	551	456
<b>Outside</b>																			
By cars, .....	16	27	25	12	19	14	23	26	18	21	15	26	28	19	19	39	43	23	36
By machinery, .....	12	14	9	14	11	13	13	15	17	9	14	12	10	12	16	25	15	33	23
By suffocation, .....	.....	.....	.....	.....	5	1	4	1	4	1	5	12	4	1	3	4	8	11	9
By boiler explosions, .....	.....	6	7	2	.....	2	10	4	9	.....	2	.....	.....	.....	.....	2	2	1	1
Miscellaneous causes, .....	19	11	14	28	22	38	28	21	24	20	15	22	11	39	17	22	31	25	32
Totals, .....	47	58	55	56	57	68	78	67	72	51	51	72	53	72	55	92	99	93	101
Grand totals inside and outside, .....	364	397	378	428	418	456	446	421	502	423	411	461	411	513	300	513	595	644	557

\*Twin shaft disaster; 58 persons entombed.



TABLE H.—Nationality of employes killed or fatally injured in and about the mines, 1892 to 1906 inclusive

Nationality	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
American, .....	83	73	76	78	86	63	73	90	92	135	80	128	135	139	136
English, .....	33	36	37	37	33	31	27	27	23	32	14	17	23	18	9
Welsh, .....	40	41	43	30	38	38	47	30	23	27	15	50	26	27	27
Scotch, .....	2	1	4	1	3	.....	7	67	4	2	2	9	26	17	1
Irish, .....	63	75	76	73	87	77	58	67	43	58	28	50	38	38	3
German, .....	18	25	27	23	17	22	22	15	21	16	15	26	18	22	17
Polish, .....	96	120	91	113	132	107	114	152	104	139	64	125	166	175	160
Hungarian, .....	43	39	62	61	61	44	36	27	18	27	14	19	25	18	21
Italian, .....	14	19	16	18	11	12	8	13	24	25	12	33	35	37	41
Slavonian, .....	9	15	2	4	3	7	7	6	19	25	16	27	38	45	34
Lithuanian, .....	9	3	1	4	4	6	.....	5	17	22	17	17	40	56	46
Austrian, .....	3	6	7	4	6	7	9	10	7	8	8	25	21	22	15
Russian, .....	3	1	2	1	4	7	12	14	4	7	13	13	23	33	25
Greek, .....	2	1	2	3	8	4	.....	1	2	.....	2	1	1	5	1
Swedish, .....	.....	1	.....	.....	1	3	1	5	.....	.....	.....	2	2	.....	.....
French, .....	.....	1	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....
Tyrolean, .....	.....	.....	.....	.....	.....	.....	.....	1	2	1	1	2	.....	5	5
Bohemian, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Assyrian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Canadian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Totals, .....	418	456	446	421	502	423	415	461	411	513	300	518	595	644	557

TABLE I.—Production of coal in tons of 2,000 pounds, number of tons produced per employe inside, quantity of explosives used, and the number of tons of coal produced per each pound of explosive used, 1892 to 1906 inclusive

Years	Total production of coal in tons of 2,000 pounds	Average number of tons of coal produced per employe inside	Number of pounds of black powder used	Number of pounds of dynamite used	Average number of tons of coal produced per pound of explosive used
1892	51,226,977	624	30,981,875	1,092,190	1.59
1893	52,841,110	611	31,723,771	1,324,142	1.60
1894	50,966,920	580	30,755,450	1,713,235	1.57
1895	56,948,756	638	32,766,775	1,797,494	1.65
1896	53,843,249	568	32,117,950	1,733,970	1.59
1897	52,581,036	549	31,804,950	2,415,650	1.54
1898	52,802,534	579	30,670,100	3,025,015	1.57
1899	60,518,331	656	34,317,275	3,649,417	1.59
1900	57,363,396	609	30,929,500	3,454,641	1.67
1901	67,094,665	682	38,020,100	4,155,685	1.59
1902	41,340,935	*482	21,128,675	2,130,965	†1.77
1903	75,232,585	†737	42,529,400	5,317,422	1.57
1904	73,594,363	667	44,779,800	6,519,312	1.43
1905	78,647,050	676	47,570,500	8,353,594	1.41
1906	72,139,510	627	40,352,075	7,980,733	1.49

The ton of 2,000 pounds is used so that a comparison can be made with the bituminous production per pound of powder used.

\*This decrease in production per employe inside was caused by the small number of days worked, on account of the strike.

†The increase in production per pound of powder used was caused by the production of the washeries during the strike.

‡The increase in production per employe was due to the large production of the washeries.

TABLE J.—Number of employees in and about the mines, by counties, 1885 to 1906, inclusive

Counties	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Carbon, .....	2,697	3,255	3,076	4,563	3,487	3,499	3,312	3,848	4,410	5,391	4,352
Columbia, .....	2,826	3,144	3,067	2,987	1,896	2,505	2,707	2,435	2,682	2,624	2,627
Dauphin, .....	19,633	21,176	21,174	21,136	21,076	21,203	21,155	21,104	2,094	2,092	1,975
Lackawanna, .....	40,600	41,873	42,487	24,423	25,176	25,262	25,406	27,555	29,080	30,475	31,446
Luzerne, .....	8,511	41,990	42,719	41,641	45,221	43,314	45,820	48,369	51,395	53,697	55,885
Northumberland, .....	24,136	8,465	9,430	10,314	12,988	12,154	12,536	12,835	13,468	13,517	13,889
Schuylkill, .....	297	25,714	24,132	25,692	28,596	30,227	30,243	31,864	33,607	31,731	32,124
Sullivan, .....	290	380	346	591	478	644	832	999	1,045	1,012	1,095
Susquehanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	100,330	103,644	106,517	112,218	119,664	119,919	123,368	130,300	138,069	139,939	148,705

Counties	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Carbon, .....	4,333	4,748	3,983	3,993	4,242	4,365	3,895	4,051	4,457	4,240	4,469
Columbia, .....	2,781	1,977	2,436	2,302	2,033	2,339	2,379	2,286	2,192	2,368	2,246
Dauphin, .....	1,988	2,072	2,174	2,390	2,577	2,353	1,945	2,140	2,113	2,167	2,233
Lackawanna, .....	32,771	33,922	32,422	30,886	32,811	34,798	35,333	37,470	40,675	40,869	41,439
Luzerne, .....	56,956	55,138	51,820	50,803	52,015	53,280	52,706	55,639	59,136	60,734	58,441
Northumberland, .....	14,445	14,583	13,833	14,697	15,105	14,187	14,863	14,580	14,345	15,208	14,730
Schuylkill, .....	35,285	35,886	34,233	33,392	33,259	33,507	34,950	33,438	35,979	40,465	40,289
Sullivan, .....	314	321	321	465	521	752	752	648	665	635	634
Susquehanna, .....	1,186	1,234	1,193	1,210	1,111	1,409	1,386	1,367	1,366	1,302	1,820
Wayne, .....	.....	.....	.....	466	.....	559	.....	253	366	370	384
Totals, .....	150,688	149,557	142,420	140,604	143,824	147,651	148,139	151,827	161,320	168,254	166,175

TABLE K.—Production of coal in tons, by counties, 1885 to 1906, inclusive

Counties	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Carbon, .....	688,098	1,164,970	893,026	1,592,865	1,227,908	1,226,541	1,191,158	1,427,543	1,510,289	1,589,395	1,577,146
Columbia, .....	612,580	601,731	740,315	712,821	515,019	569,404	761,559	889,490	741,991	510,537	493,042
Dauphin, .....	561,653	407,874	625,708	579,941	605,773	577,490	633,569	889,879	640,723	693,607	718,836
Lackawanna, .....	7,174,412	7,401,289	8,925,779	10,125,019	8,770,807	9,374,359	10,184,348	11,410,554	11,667,550	11,470,382	11,893,382
Luzerne, .....	14,787,379	14,916,161	15,069,747	17,270,224	15,834,385	15,835,674	17,726,560	17,548,508	18,253,145	17,243,528	19,157,114
Northumberland, .....	2,561,135	2,250,822	2,844,340	2,994,223	2,373,548	3,008,547	3,672,828	3,724,224	3,731,405	3,893,060	4,477,141
Schuylkill, .....	7,546,255	7,876,063	8,359,953	8,065,708	8,613,283	9,045,216	9,758,111	9,564,534	9,922,086	9,581,692	11,452,388
Sullivan, .....	119,612	61,767	92,679	84,030	71,390	63,746	74,884	76,009	70,418	.....	152,141
Susquehanna, .....	84,459	37,671	176,421	213,595	261,827	315,350	369,713	457,622	571,956	413,578	810,904
Wayne, .....	.....	.....	.....	.....	.....	.....	3,490	.....	.....	.....	.....
Totals, .....	34,135,583	34,777,618	37,644,018	41,628,426	38,973,950	40,166,327	44,376,180	45,738,373	47,179,563	45,506,179	50,847,104

Counties	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Carbon, .....	1,488,550	1,367,225	1,445,298	1,630,595	1,663,961	1,659,392	986,197	1,919,662	2,012,064	2,211,077	2,006,092
Columbia, .....	443,370	554,275	575,775	595,043	575,843	1,080,291	658,991	1,208,843	1,058,296	1,097,944	2,865,237
Dauphin, .....	624,335	629,849	677,465	795,757	695,656	741,582	377,983	654,437	645,966	647,648	656,003
Lackawanna, .....	11,623,435	11,946,871	11,589,091	12,948,919	12,892,198	15,409,040	10,581,401	17,838,333	16,971,086	17,597,468	16,821,929
Luzerne, .....	17,963,946	17,141,800	17,793,773	19,899,742	19,179,573	21,306,312	13,016,026	24,891,394	24,736,874	26,779,139	23,760,586
Northumberland, .....	4,117,569	3,774,607	3,519,305	4,399,547	4,188,343	4,849,099	2,823,273	4,927,304	4,925,578	4,895,697	4,792,108
Schuylkill, .....	11,092,772	10,971,943	10,980,700	12,226,938	11,616,466	13,640,766	7,698,366	14,663,457	14,440,330	15,046,250	14,631,909
Sullivan, .....	151,758	164,046	147,533	163,555	11,269,892	136,165	395,194	282,692	282,772	277,229	320,903
Susquehanna, .....	474,637	476,488	422,939	624,125	496,432	339,487	404,248	714,976	618,250	697,273	501,877
Wayne, .....	.....	.....	.....	275,955	19,420	329,877	.....	61,513	68,172	59,829	63,733
Totals, .....	48,074,330	46,947,354	47,145,174	54,034,224	51,217,318	59,905,951	36,911,549	67,171,951	65,719,258	70,220,554	64,410,277



TABLE L.—Fatal accidents for each 1,000 employees in and about the mines and tons of coal mined for each fatal accident, 1870 to 1906 inclusive

Years	Employees	Fatal accidents	Fatal accidents per 1,000 employees	Number of tons of coal mined	Number of tons of coal mined for each fatal accident
1870, .....	35,600	211	5.93	12,653,575	59,970
1871, .....	37,488	210	5.60	13,868,087	66,039
1872, .....	44,745	223	4.98	13,899,976	62,332
1873, .....	48,199	264	5.48	18,751,358	71,028
1874, .....	53,402	231	4.33	17,794,857	77,034
1875, .....	69,966	238	3.40	20,895,220	87,795
1876, .....	70,474	228	3.24	20,929,166	86,013
1877, .....	66,842	194	2.90	22,077,869	113,803
1878, .....	63,964	187	2.92	18,661,577	99,795
1879, .....	68,847	262	3.81	27,711,250	106,768
1880, .....	73,373	202	2.75	24,977,261	123,650
1881, .....	76,031	273	3.59	30,537,998	111,861
1882, .....	82,200	291	3.54	31,301,277	107,565
1883, .....	91,421	323	3.53	33,703,008	104,344
1884, .....	101,073	332	3.28	32,561,373	98,076
1885, .....	100,320	332	3.31	34,135,583	102,818
1886, .....	103,044	279	2.71	34,777,618	124,651
1887, .....	106,517	316	2.97	37,644,018	119,127
1888, .....	122,218	364	2.98	41,638,426	114,391
1889, .....	119,664	397	3.32	38,973,950	98,171
1890, .....	119,919	378	3.15	40,166,327	106,260
1891, .....	123,308	428	3.47	44,376,180	103,683
1892, .....	130,300	413	3.21	45,738,373	109,422
1893, .....	138,069	456	3.30	47,179,563	103,464
1894, .....	139,939	446	3.19	45,506,179	102,032
1895, .....	143,705	421	2.93	50,847,104	120,777
1896, .....	150,088	502	3.34	48,074,330	95,766
1897, .....	149,557	423	2.83	46,947,354	110,987
1898, .....	142,420	411	2.89	47,154,174	114,708
1899, .....	140,604	461	3.28	54,034,224	117,211
1900, .....	143,824	411	2.86	51,217,318	124,616
1901, .....	147,651	513	3.47	59,905,951	116,775
1902, .....	148,139	300	2.03	36,911,549	123,038
1903, .....	151,827	518	3.41	67,171,951	129,671
1904, .....	161,320	595	3.69	65,709,258	110,446
1905, .....	168,254	644	3.83	70,220,554	109,038
1906, .....	166,175	557	3.35	64,410,277	115,638



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# ANTHRACITE DISTRICTS

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## First District

LACKAWANNA, SUSQUEHANNA AND WAYNE COUNTIES

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Carbondale, Pa., February 20, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the First Anthracite District, for the year ending December 31, 1906.

Respectfully submitted,  
P. J. MOORE,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	23
Number of mines, .....	54
Number of mines in operation, .....	54
Number of tons of coal shipped to market, .....	2,954,789
Number of tons used at mines for steam and heat, .....	263,133
Number of tons sold to local trade and used by employes, .....	35,284
Number of tons produced, .....	3,253,206
Number of persons employed inside of mines, .....	6,421
Number of persons employed outside, .....	2,091
Number of fatal accidents inside of mines, .....	19
Number of fatal accidents outside, .....	4
Number of non-fatal accidents inside of mines, .....	44
Number of non-fatal accidents outside, .....	5
Number of tons of coal produced per fatal accident inside, .....	171,221
Number of persons employed per fatal accident inside, ..	338
Number of persons employed per fatal accident outside, ..	523
Number of persons employed per non-fatal accident inside, ..	146
Number of persons employed per non-fatal accident outside, .....	418
Number of wives made widows, .....	12
Number of children orphaned, .....	20
Number of steam locomotives used inside of mines, .....	2
Number of steam locomotives used outside, .....	15
Number of compressed air locomotives used inside, ....	10
Number of electric motors used inside, .....	27
Number of fans in use, .....	34
Number of gaseous mines in operation, .....	1
Number of non-gaseous mines in operation, .....	53
Number of new mines opened, .....	8
Number of old mines abandoned, .....	3

**TABLE A**  
**PRODUCTION OF COAL**

Names of Operators	Tons
Delaware and Hudson Company, .....	1,661,911
Hillside Coal and Iron Company, .....	767,597
Seranton Coal Company, .....	446,810
Northwest Coal Company, .....	136,616
Finn Coal Company, .....	19,481
Carbondale Coal Mining Company, .....	14,986
Morss Hill Coal Company, .....	11,918
Northeast Coal Company, .....	8,738
Clinton Falls Coal Company, .....	7,367
Sunny Side Coal Company, .....	78,295
East Mountain Coal Company, .....	1,023
Edgerton Coal Company, .....	98,464
<b>Total, .....</b>	<b>3,253,206</b>

**Production by Counties**

Lackawanna, .....	2,687,596
Susquehanna, .....	501,877
Wayne, .....	63,733
<b>Total, .....</b>	<b>3,253,206</b>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Fatal Accidents			Non-Fatal Accidents											
	Inside	Outside	Total	Inside	Outside	Total									
Delaware and Hudson Co., .....	5	1	6	22	3	25	332,332	75,541	3,224	917	4,141	645	917	147	306
Hillside Coal and Iron Co., .....	8	.....	8	13	2	15	95,949	59,046	1,600	491	2,091	200	.....	123	246
Scranton Coal Co., .....	4	2	6	5	.....	5	111,702	89,362	1,007	387	1,394	252	194	201	.....
Northwest Coal Co., .....	1	.....	1	3	.....	3	136,616	46,539	305	61	366	305	.....	102	.....
Finn Coal Co., .....	1	.....	1	.....	.....	.....	19,481	.....	76	31	107	76	.....	.....	.....
Morris Hill Coal Co., .....	.....	.....	.....	1	.....	1	11,918	.....	84	38	122	.....	.....	84	.....
Northeast Coal Co., .....	.....	1	1	.....	.....	.....	.....	.....	49	32	81	.....	32	.....	.....
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	.....	76	134	210	.....	.....	.....	.....
Totals and averages for district, .....	13	4	23	44	5	49	171,221	73,936	6,421	2,091	8,512	338	523	146	418



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....	1		3			1						2	3	15.79
Falls of roof, .....			3			1		1	2				8	42.10
Mine cars, .....	1		1			1	1	1					5	26.31
Explosions of powder and dynamite, .....						1		1				1	1	5.27
Premature blasts, .....		1									1		2	10.53
Totals, .....	2	1	4			4	1	2	2		1	2	19	100.00
Causes of Accidents Outside														
Cars, .....									1				1	25.00
Machinery, .....											2		2	50.00
Miscellaneous, .....											1		1	25.00
Totals, .....									1		3		4	100.00
Grand totals inside and outside, .....	2	1	4			4	1	2	3		4	2	23	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, .....	1	1			3	1	3		4	1	1	1	1	2.27
Falls of roof, .....	1	1	1			1	1		1	1	1	1	22	50.00
Mine cars, .....	1	1	1		1	1	1	1	1	1			14	31.82
Premature blasts, .....						1	1	2	1				5	11.37
Miscellaneous, .....	1											1	2	4.54
Totals, .....	5	3	3		4	3	5	3	6	2	2	3	44	100.00
Causes of Accidents Outside														
Cars, .....				1	1							1	3	60.00
Machinery, .....						1							1	20.00
Miscellaneous, .....			1										1	20.00
Totals, .....			1	1	1	1						1	5	100.00
Grand totals inside and outside, .....	5	3	4	1	5	4	5	3	6	2	2	4	49	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	1	1	2	.....	.....	1	.....	1	1	.....	.....	2	8
Miners' laborers, .....	1	1	2	.....	.....	2	1	1	1	.....	1	.....	9
Drivers and runners, .....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2
Totals, .....	2	1	4	.....	.....	4	1	2	2	.....	1	2	19
Slatepickers (boys), .....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
All other employees, .....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	3
Totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	4
Grand totals inside and outside, .....	2	1	4	.....	.....	4	1	2	3	.....	4	2	23

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	1	2	1	....	1	2	1	2	5	2	2	2	21
Miners' laborers, .....	2	2	....	....	2	1	....	....	1	....	....	1	11
Drivers and runners, .....	1	3	2	....	1	....	1	1	....	....	....	....	9
Company men, .....	....	1	....	....	....	....	....	....	....	....	....	....	1
All other employes, .....	1	....	....	....	....	....	1	....	....	....	....	....	2
Totals, .....	5	8	3	....	4	3	5	3	6	2	2	3	44
Outside													
Slatepickers (boys), .....	....	....	....	....	....	1	....	....	....	....	....	....	1
Slatepickers (men), .....	....	....	....	....	....	....	....	....	....	....	....	1	1
All other employes, .....	....	....	1	1	1	....	....	....	....	....	....	....	3
Totals, .....	....	....	1	1	1	1	....	....	....	....	....	1	5
Grand totals inside and outside, ....	5	8	4	1	5	4	5	3	6	2	2	4	49

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	...	...	...	...	...	1	...	...	...	1	...	3
Irish, .....	1	...	...	...	...	...	...	...	...	...	1	...	1
Polish, .....	1	...	...	...	...	2	...	...	1	...	...	...	3
Italian, .....	...	1	...	...	...	...	...	...	1	...	1	...	3
Lithuanian, .....	...	1	...	...	...	1	...	...	1	...	...	...	3
Austrian, .....	...	...	...	...	...	1	...	...	...	...	...	...	1
Russian, .....	...	...	...	...	...	1	...	...	1	...	2	...	4
Totals, .....	2	1	4	...	...	4	1	2	3	...	4	2	23

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	3	3	...	2	1	1	1	...	1	...	1	15
English, .....	...	1	1	...	...	1	...	1	2	...	1	...	4
Irish, .....	...	1	1	...	...	...	...	...	...	...	...	...	2
Polish, .....	1	2	...	...	1	1	...	2	2	1	...	...	10
Italian, .....	1	...	...	1	1	...	...	...	...	...	1	2	6
Slavonian, .....	...	...	...	...	...	...	1	...	...	...	...	...	1
Lithuanian, .....	...	...	...	...	...	...	2	...	...	...	...	...	2
Austrian, .....	...	2	...	...	...	1	...	...	1	...	...	1	5
Russian, .....	1	...	...	...	1	...	1	...	1	...	...	...	4
Totals, .....	5	8	4	1	5	4	5	3	6	2	2	4	49

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed	Average number of cubic feet per minute provided for each person
Delaware and Hudson Co.	Slope.....	Non-gas.	Fans.....	17	4	4½	110	1.5	Guibal...	Steam, ...	3	64,640	61,914	65,948	197	314
Clinton, .....	Slope.....	Non-gas.	Fan.....	30	5	5	75	1.2		Steam, ...	3	64,288	62,343	64,263	180	356
Clinton River slope, .....	Slope.....	Non-gas.	Fan.....	30	5	5	75	1.2		Steam, ...	3	64,288	62,343	64,263	180	356
Clinton, North opening, .....	Drift.....	Non-gas.	Fan.....	10	2½	2½	112	0.6		Steam, ...	1	31,628	26,790	30,651	60	436
Clinton, South opening, .....	Drift.....	Non-gas.	Fan.....	10	2½	2½	112	0.6		Steam, ...	1	31,628	26,790	30,651	60	436
Clinton, Grassy Vein, .....	Slope.....	Non-gas.	Fan.....	30	5	5	45	0.3		Steam, ...	1	36,060	31,970	31,874	79	404
Coal Brook, Mills N. split, .....	Drift.....	Non-gas.	Fan.....	17	4	4½	85	1.2		Electricity	2	40,400	35,690	47,000	140	255
Coal Brook, Mills S. split, .....	Drift.....	Non-gas.	Fan.....	17	4	4½	85	1.2		Electricity	2	31,276	26,890	39,810	115	231
Coal Brook, N. 5 tunnel, .....	Tunnel...	Non-gas.	Fan.....	20	5	5	80	1.6		Steam, ...	3	39,700	36,670	42,550	178	292
Coal Brook, No. 7 and No. 14 tunnels, .....	Tunnels...	Non-gas.	Fan.....	20	5	5	78	1.6		Electricity	2	44,330	42,590	46,610	240	212
Coal Brook, No. 12 and No. 6 tunnels, .....	Tunnels...	Non-gas.	Fan.....	20	5	5	80	1.6		Steam, ...	2	22,980	20,220	25,990	135	150
Coal Brook, No. 13 tunnel, .....	Tunnel...	Non-gas.	Fan.....	17	4	4½	78	1.0		Electricity	1	26,550	22,510	28,230	94	240
Carbondale No. 1, .....	Drift.....	Non-gas.	Fan.....	10	3½	2½	120	0.5		Electricity	1	42,000	39,000	44,500	55	709
Carbondale No. 1, .....	Slope.....	Non-gas.	Fan.....	10	3½	2½	165	0.8		Electricity	1	60,900	58,500	63,500	75	780
Carbondale No. 1, .....	Drift.....	Non-gas.	Natural, .....	10	3½	2½	165	0.8		Electricity	1	55,000	51,050	58,500	207	246
Powderly, .....	Slope.....	Non-gas.	Fan.....	17	4	4	64	0.5		Steam, ...	4	49,860	44,719	54,600	223	200
Powderly, .....	Tunnel...	Non-gas.	Natural, .....	17	4	4	64	0.5		Steam, ...	4	38,810	14,364	19,140	70	205
Jermyn, .....	Drift.....	Non-gas.	Natural, .....	22	5	5½	90	1.9		Natural, .....	8	23,167	19,590	28,500	58	337
White Oak, .....	Shaft.....	Non-gas.	Fan.....	17	4	4	90	2.0		Natural, .....	2	243,200	162,360	256,350	629	258
White Oak, .....	Tunnel...	Non-gas.	Fan.....	20	5	5	76	1.00		Steam, ...	1	76,100	66,700	66,700	197	240
White Oak Nos. 1, 3½, 7* .....	Drifts...	Non-gas.	Natural, .....	20	5	5	20	0.6		Steam, ...	1	20,160	11,340	20,720	25	453

\*Robbing pillars.

Locality	Shaft, Slope, Drifts, ...	Non-gas.	Fan, ...	24	7	65	0.4	Guibal, ...	Steam, ...	7	113,858	107,228	121,054	518	207
Hillside Coal and Iron Co.															
Forest City No. 2	Shaft, ...	Non-gas.	Fan, ...	14	5	100	1.0		Steam, ...	3	36,800	41,100	143	239	143
Forest City, ...	Slope, ...	Non-gas.	Fan, ...	18	5	80	0.6		Steam, ...	4	55,400	78,100	84,300	361	216
Clifford, ...	Shaft, ...	Non-gas.	Fans, ...	12	4	85	0.6		Electricity, ...	5	102,150	94,800	109,316	218	238
Erie, ...	Shaft, ...	Non-gas.	Fan, ...	18	5	100	0.5		Steam, ...	2	76,460	69,030	53,000	58	1,130
Glenwood, ...	Shaft, ...	Non-gas.	Fan, ...	18	5	100	0.5		Steam, ...	2	76,460	69,030	53,000	58	1,130
Keystone, Nos. 1, 2 and 3.*	Drifts, ...	Non-gas.	Natural, ...	18	5	100	0.5		Steam, ...	2	76,460	69,030	53,000	58	1,130
Scranton Coal Co.															
Raymond Nos. 1, 2 and 3, ...	Shaft, ...	Non-gas.	Fans, ...	10	3	125	0.75		Steam, ...	4	188,310	182,700	194,350	657	278
Riverside, ...	Slope, ...	Non-gas.	Fans, ...	16	2	90	0.5		Steam, ...	4	76,850	68,075	77,110	196	347
Black Diamond, ...	Shaft, ...	Gaseous, ...	Fan, ...	22	4	76	.4		Steam, ...	3	62,000	50,600	61,000	134	321
	5 drifts, ...	Non-gas.	Fan, ...	12	4	66	.2		Steam, ...	3	62,000	50,600	61,000	134	321
Northwest Coal Co.															
Northwest No. 1, ...	Slope, ...	Non-gas.	Fan, ...	14	5	70	1.4		Steam, ...	2	45,800	43,370	45,845	62	700
Northwest No. 1, ...	Slope, ...	Non-gas.	Fan, ...	16	6	80	1.5		Steam, ...	3	94,953	92,042	94,970	243	381
Finn Coal Co.															
Finn, ...	Drift, ...	Non-gas.	Fan, ...	10	3%	65	0.1		Steam, ...	2	29,500	17,300	27,500	76	227
Morss Hill Coal Co.															
Morss Hill, ...	Slope, ...	Non-gas.	Fan, ...	12	3	37	.75		Steam, ...	1	17,650	15,000	18,000	74	202
Morss Hill, ...	Tunnel, ...	Non-gas.	Natural, ...	...	...	...	...		Natural, ...	1	5,000	4,500	5,600	10	450
Carbondale Coal Mining Co.															
Carbondale, ...	Slope, ...	Non-gas.	Natural, ...	...	...	...	...		Natural, ...	1	5,000	4,500	6,000	21	214
Northeast Coal Co.															
Northeast, ...	Tunnel, ...	Non-gas.	Fan, ...	12	3	30	0.3		Steam, ...	1	18,475	15,300	21,005	49	312
Clinton Falls Coal Co.															
Clinton Falls, ...	Drift, ...	Non-gas.	Natural, ...	...	...	...	...		Natural, ...	1	11,500	8,000	12,000	6	1,333
Clinton Falls, ...	Drift, ...	Non-gas.	Natural, ...	...	...	...	...		Natural, ...	1	5,000	4,500	6,000	8	1,500
Sunny Side Coal Co.															
Sunny Side, ...	Drift, ...	Non-gas.	Natural, ...	...	...	...	...		Natural, ...	1	20,000	18,000	22,000	22	818
East Mountain Coal Co.															
East Mountain Nos. 1 and 2, ...	Drifts, ...	Non-gas.	Natural, ...	...	...	...	...		Natural, ...	1	6,000	5,000	7,000	22	227

\*Robbing pillars.





Sunny Side washery, .....J	Lackawanna, ..	M. F. Dolphin, ....	Scranton, .....	.....	Erie and D. and H.
Edgerton Coal Co.					
Edgerton washery, .....	Lackawanna, ..	Frank Hemelright,	Jermyn, .....	.....	Erie and D. and H.
Fast Mountain Coal Co.					
East Mountain, .....	Lackawanna, ..	E. Lathrop, .....	Carbondale, .....	.....	Local sales

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries		County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co.													
Clinton, .....	Lackawanna and Wayne.	289,440	24,600	2,469	316,509	215	728	.....	5	14,941	40,079	70	
Coal Brook, .....		448,659	18,400	.....	467,059	237	1,137	2	7	16,601	6,559	72	
Carbondale No. 1, .....		.....	13,900	.....	13,900	194	416	2	3	3,713	3,527	53	
Powderly, .....		291,815	29,596	.....	321,321	242	506	.....	2	2,459	6,402	47	
Jermyn, .....		241,896	20,356	3,173	265,355	185	732	1	3	7,311	250	53	
White Oak, .....		160,968	7,050	2,388	170,356	186	588	1	6	5,880	32,667	52	
Totals, .....		1,432,688	113,842	7,980	1,554,510	.....	4,107	6	25	50,915	89,484	347	
Washeries													
Racket Brook, .....	Lackawanna.	79,833	4,800	.....	84,633	233	29	.....	.....	.....	.....	.....	
Jermyn, .....		16,676	.....	.....	16,676	31	5	.....	.....	.....	.....	.....	
Powderly, .....		6,092	.....	.....	6,092	14	.....	.....	.....	.....	.....	.....	
Totals, .....		102,601	4,800	.....	107,401	.....	34	.....	.....	.....	.....	.....	
Hillside Coal and Iron Co.													
Forest City, .....	Susquehanna.	1,535,289	118,642	7,980	1,661,911	.....	4,141	6	25	50,915	89,484	347	
Clifford, .....		242,617	21,213	8,226	272,056	202	814	5	4	12,412	22,127	61	
Concord, .....		*214,350	15,155	316	229,821	205	506	1	5	6,349	17,448	46	
Erie, .....		84,048	15,247	1,907	101,202	151	417	2	4	4,102	10,540	44	
Glenwood, .....		63,497	25,607	.....	89,104	137	287	.....	1	3,366	3,247	24	

\*81,580 tons produced at Forest City but shipped from Clifford.

Totals,	39,027	715	39,742	177	74	1	1,015	867	10
Keystone,	35,672		35,672	113	13				
Edle washery,									
	679,211	77,937	767,597		2,091	8	27,244	54,229	185
Scranton Coal Co.									
Raymond,	238,637	20,650	309,989	182	907	6	9,225	10,460	54
Riverside,	65,736	15,585	83,003	164	273	3	4,334	1,375	34
Black Diamond,	51,018	3,000	54,818	160	214	1	3,575	8,800	22
Totals,	405,391	39,235	446,810		1,394	6	17,144	20,225	110
Northwest Coal Co.									
Northwest,	125,910	10,120	136,616	148	396	1	6,472	12,221	61
Finn Coal Co.									
Finn,	14,892	1,200	3,389	180	107	1	725	625	7
Carbondale Coal Mining Co.									
Carbondale,	11,397	1,200	2,389	282	47		280		5
Morss Hill Coal Co.									
Morss Hill,	6,914	1,200	3,804	136	122	1	1,050	2,875	7
Northeast Coal Co.									
Northeast,	8,193	545	8,738	82	81	1	415	275	5
Clinton Falls Coal Co.									
Clinton Falls,	5,754			255	20		420		4
Sunny Side Coal Co.									
Sunny Side,	1,296		1,296	25	42		68		6
Sunny Side washery,	69,233	7,460	76,999	186	44				
Grand totals,	70,529	7,460	78,295		86		68		6
Totals,									
East Mountain Coal Co.		40	983	47	32		60	10	3
East Mountain,									
Edgerton Coal Co.									
Edgerton washery,	91,309	5,554	98,464	202	25				3
	2,954,789	263,133	35,284		8,512	23	49,104,793	179,914	748

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co.,	Lackawanna and Wayne.	1,535,289	118,642	7,980	1,661,911	4,141	6	25	50,915	89,484	347
Hillside Coal and Iron Co.,	Lackawanna and Susquehanna.	679,211	77,937	10,449	767,697	2,091	8	15	27,244	54,229	185
Scranton Coal Co.,	Lackawanna.	405,391	39,235	2,184	446,810	1,394	6	5	17,144	26,225	110
Northwest Coal Co.,	Wayne.	125,910	10,120	586	136,616	366	1	3	6,472	12,221	61
Finn Coal Co.,	Lackawanna.	14,892	1,200	3,389	19,481	107	1	...	725	625	7
Carbondale Coal Mining Co.,	Lackawanna.	11,397	1,200	2,389	14,986	47	...	...	289	...	5
Morris Hill Coal Co.,	Lackawanna.	6,914	1,200	3,804	11,918	122	...	1	1,050	...	7
Northeast Coal Co.,	Wayne.	8,193	545	...	8,738	81	1	...	415	275	5
Clinton Falls Coal Co.,	Wayne.	6,754	...	1,613	7,367	20	...	...	420	...	4
Sunny Side Coal Co.,	Lackawanna.	70,529	7,400	306	78,286	86	...	...	60	...	6
East Mountain Coal Co.,	Lackawanna.	40	953	953	1,023	32	...	...	...	...	3
Edgerton Coal Co.,	Lackawanna.	91,369	5,554	1,601	98,464	25	...	...	...	...	3
Totals,		2,954,789	263,133	35,284	3,253,206	8,512	23	49	104,793	179,944	743



TABLE 2. —PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Delaware and Hudson Co., .....	Lackawanna and Wayne.	49	1,915	31	5,150	7,065	8	10	12	68	29	34,680	8,829	3	5
Hillside Coal and Iron Co., .....	Lackawanna and Susquehanna.	10	190	41	3,995	4,185	3	.....	13	48	24	13,229	11,340	7	.....
Scranton Coal Co., .....	Lackawanna.	9	130	16	1,700	1,830	3	.....	2	33	6	5,620	4,010	1	1
Northwest Coal Co., .....		3	750	3	100	125	2	.....	9	9	2	160	60	.....	2
Finn Coal Co., .....		1	25	1	160	160	1	.....	2	5	.....	.....	.....	.....	.....
Carbondale Coal Mining Co., .....		2	.....	2	75	75	.....	.....	2	4	.....	.....	.....	.....	.....
Morris Hill Coal Co., .....	Wayne.	1	.....	1	160	160	1	.....	6	6	.....	.....	.....	.....	.....
Northeast Coal Co., .....		2	60	2	240	240	1	.....	.....	.....	.....	.....	.....	.....	.....
Clinton Falls Coal Co., .....		1	.....	3	25	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sunny Side Coal Co., .....		6	222	1	.....	222	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Mountain Coal Co., .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edgerton Coal Co., .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	76	2,592	101	12,355	14,947	17	10	27	132	61	53,689	24,230	11	8

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside	
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employees	Total outside		
Delaware and Hudson Co.	Lack. and Wayne,  Lackawanna,  Powderly,  Jermyn,  White Oak,	1	3	....	198	225	74	22	6	27	20	576	....	1	5	14	31	22	1	78	152	728	
		1	4	....	288	326	93	24	2	64	70	862	....	1	5	10	17	85	2	155	275	1,137	
		1	2	....	96	157	32	5	2	17	25	337	....	1	2	11	4	7	1	53	79	416	
		1	1	....	118	153	45	8	2	17	6	351	....	1	2	13	32	32	1	74	155	506	
		1	1	....	219	257	73	15	2	28	32	629	....	1	2	11	19	16	1	74	155	732	
		1	2	....	150	209	68	8	2	17	12	469	....	1	2	11	32	1	1	71	103	588	
Washeries	Racket Brook,  Jermyn,  Powderly,  Lackawanna,  Totals,	6	14	....	1,049	1,337	385	82	16	170	165	3,224	....	6	18	70	135	163	7	484	883	4,107	
		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hillside Coal and Iron Co.	Susquehanna,  Forest City,  Clifford,  Erie,  Glenwood,  Keystone,  Erie washery,  Totals,	3	2	....	247	253	45	3	8	11	89	661	1	1	11	12	30	7	3	87	153	814	
		1	1	....	139	125	52	3	3	15	28	267	....	1	4	6	32	7	....	89	139	506	
		1	1	....	116	114	45	2	4	....	35	318	1	1	5	10	9	11	2	60	98	417	
		1	....	....	70	75	27	5	6	6	6	196	....	1	2	12	14	10	....	32	71	267	
		1	....	....	22	21	11	....	....	2	1	58	....	1	2	1	2	1	1	....	9	16	74
		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals,	Totals,	7	4	....	594	588	180	13	21	34	159	1,600	2	5	24	44	89	36	5	286	491	2,091	
		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	

[illegible]

\*Washery employees included above.

TABLE 2.—Recapitulation

Names of Operators	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware and Hudson Co., ....	Lackawanna and Wayne.	6	14	....	1,019	1,337	385	82	16	170	165	3,224	....	7	19	73	136	168	8	506	917	4,141
Hillside Coal and Iron Co., ....	Lackawanna and Susquehanna.	7	4	....	594	588	180	13	21	34	159	1,600	2	5	24	44	89	36	5	286	491	2,091
Scranton Coal Co., .....	{ Lackawanna,...	3	3	1	398	381	138	18	9	....	56	1,007	2	3	20	45	108	37	4	168	387	1,394
Northwest Coal Co., .....		2	1	....	116	120	39	1	3	19	5	305	1	1	6	7	13	1	2	30	61	366
Finn Coal Co., .....		1	1	....	27	21	16	2	2	8	1	76	1	1	1	3	14	3	1	6	31	107
Carbondale Coal Mining Co., .....		1	....	....	....	8	5	....	....	....	1	21	1	1	1	1	3	3	1	14	26	47
Morris Hill Coal Co., .....	Wayne.	1	....	....	20	10	7	1	1	2	42	84	1	1	2	4	8	1	2	20	38	122
Northeast Coal Co., .....		1	....	....	19	19	7	1	....	....	....	49	1	1	2	4	4	3	1	16	32	81
Clinton Falls Co., .....		1	....	....	5	3	1	....	....	3	....	10	1	1	....	1	6	8	....	3	10	20
Sunny Side Coal Co., .....		1	....	....	8	8	2	....	....	....	....	22	1	1	1	1	1	1	1	44	64	86
East Mountain Coal Co., .....	{ Lackawanna,...	1	....	....	....	....	....	....	....	4	....	23	1	1	1	1	2	....	....	3	9	26
Edgerton Coal Co., .....		1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	20	26	26
Totals, .....	.....	25	21	1	2,352	2,503	774	118	52	243	432	6,421	12	22	82	192	390	252	25	1,116	2,091	8,512

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Clinton, ..... Delaware and Hudson Co.	Lackawanna and Wayne.	24	23	24	.....	15	24	19	21	11	15	20	19	215
Coal Brook, ..... Carbondale No. 1, .....	Lackawanna, ...	24	22	25	.....	16	24	23	18	18	20	25	22	237
Powderly, ..... Jernyn, .....		24	22	25	.....	14	23	20	20	16	16	.....	15	194
White Oak, ..... Hillside Coal and Iron Co.		24	23	25	.....	12	26	24	25	18	20	23	24	202
Forest City, ..... Clifford, .....		24	23	22	4	17	.....	5	23	14	16	24	20	165
Erle, ..... Glenwood, .....	Susquehanna.	24	16	22	.....	11	21	20	17	15	13	18	16	196
Keystone, ..... Scranton Coal Co.	Susquehanna.	16	15	23	.....	12	22	20	16	14	20	22	21	202
..... Black Diamond, .....	Lackawanna.	15	17	21	10	20	22	19	14	10	21	17	19	207
..... Northwest, .....	Lackawanna.	14	19	13	.....	10	17	14	13	10	15	16	15	151
..... Finn Coal Co.	Lackawanna.	16	13	15	.....	7	16	14	13	10	15	.....	16	127
..... Carbondale Coal Mining Co.	Lackawanna.	17	15	18	.....	11	19	17	13	14	18	16	17	177
..... Morss Hill Coal Co.	Lackawanna.	12	9	17	.....	12	21	21	20	17	14	19	20	182
.....	Lackawanna.	14	10	17	.....	9	17	15	16	14	13	19	20	164
.....	Lackawanna.	16	13	19	.....	8	17	16	14	13	13	16	15	160
.....	Lackawanna.	16	13	16	.....	10	15	14	15	12	14	12	11	148
.....	Lackawanna.	18	15	18	12	10	15	14	16	10	14	18	20	180
.....	Lackawanna.	23	21	22	24	25	25	22	25	25	24	25	21	282
.....	Lackawanna.	.....	.....	9	.....	.....	20	19	18	13	20	20	17	136





TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 12	Anthony McGuire, ...	American,...	Tail rope trip rider.	24	M.	1	...	Coal Brook, .....	Lackawanna,...	Fatally injured by falling under a trip of loaded cars in some unknown manner.
29	Joseph Sawvich, ....	Polish,.....	Miner, ....	30	M.	1	4	Erie, .....	Lackawanna,...	Fatally injured by fall of roof near face of chamber.
Feb 12	Frank Rybosh, .....	Austrian,...	Laborer, ...	27	M.	1	1	Forest City slope,...	Susquehanna,...	Fatally injured by flying coals from a blast.
March 1	Samuel Faslo, .....	Italian,.....	Laborer, ...	30	M.	1	3	White Oak, .....	Lackawanna,...	Fatally injured by fall of roof near face of chamber while loading car of coal.
14	Stanley Mehulski, ....	Polish,.....	Laborer, ...	22	S.	...	...	Forest City, .....	Susquehanna,...	Fatally injured by fall of roof near face of workings while loading a car.
22	Julius Zellski, .....	Lithuanian,...	Miner, ....	36	M.	1	4	Forest City, .....	Susquehanna,...	Fatally injured by mine cars inside. Died twelve hours later.
27	Casper Kowash, .....	Polish,.....	Miner, ....	43	M.	1	...	No. 1, Carbondale,...	Lackawanna,...	Fatally injured by a fall of roof at the face of working place.
June 16	Samuel Farle, .....	Russian,.....	Miner, ....	34	M.	1	4	Finn, .....	Lackawanna,...	Fatally injured by blasting powder and dynamite exploding while he was preparing a blast.
26	Frank ...	Polish,.....	Laborer, ...	29	S.	...	...	Northwest, .....	Lackawanna,...	Fatally injured by fall of coal near face of working place while loading a car.
27	Anthony Bolefski, ...	Lithuanian,...	Laborer, ...	22	M.	1	1	Forest City, .....	Susquehanna,...	Fatally injured by fall of roof near face of workings while loading a car.
30	John Gidish, .....	Polish,.....	Driver, ....	18	S.	...	...	Forest City, .....	Susquehanna,...	Fatally injured in some unknown manner by mine cars. Inside.
July 20	William Eastlake, ..	American,...	Laborer, ...	20	S.	...	...	No. 1, Carbondale,...	Lackawanna,...	Fatally injured by being caught between two loaded cars at foot of slope.
Aug. 7	John Duiskey, .....	Polish,.....	Laborer, ...	26	S.	...	...	Raymond, .....	Lackawanna,...	Fatally injured by fall of roof near face of chamber while loading a car.
10	Lewis Posvolish, .....	Polish,.....	Miner, ....	25	M.	1	...	Clifford, .....	Susquehanna,...	Caught between cars while attempting to cross from one side to the other on his way home. Died August 14.
Sept. 4	Joseph Krousha, .....	Polish,.....	Laborer, ...	21	S.	...	...	Raymond, .....	Lackawanna,...	Fatally injured by fall of roof near right side while shoveling coal.
17	William Barlach, ....	Russian,.....	Miner, ....	26	S.	...	...	Erie, .....	Lackawanna,...	Fatally injured by fall of roof while barring out a shot.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 26	Gabriel Cerra, .....	Italian,.....	Outside laborer.	19	S.	....	....	Coal Brook, .....	Lackawanna,...	Fatally injured by mine cars in some unknown manner. Outside.
Nov. 8	John Zonaski, .....	Russian,.....	Laborer, ...	40	M.	1	3	Jermyn, .....	Lackawanna,...	Fatally injured by flying coals from a blast that he fired in the absence of his miner. He died November 14, at Carbondale Emergency Hospital. He was found lying by the first cross-cut, which was eighty-three feet from face of chamber. The verdict of inquest censured victim and the company.
10	George Wengrin, .....	Russian,.....	Slatepicker,	16	S.	....	....	Northeast, .....	Lackawanna, ...	Fatally injured by being squeezed between a screen and the chute under the screen in breaker. Outside.
17	Frank Montour, .....	Italian,.....	Breaker-sweeper.	16	S.	....	....	Raymond, .....	Lackawanna, ...	Fatally injured by being caught in some unknown manner between a belt wheel and a pulley.
21	Vincent Polish, .....	American,...	Driver, .....	18	S.	....	....	Raymond, .....	Lackawanna, ...	Fatally injured by being thrown from a mule on which he was riding to the barn. He became tangled in the traces and was dragged about a half mile. When found life was extinct. He was warned not to attempt to ride the mule, but did not heed the warning. Outside.
Dec. 15	Patrick Duffy, .....	Irish,.....	Miner, .....	65	M.	1	....	Raymond, .....	Lackawanna,...	Fatally injured by fall of coal. After firing a shot he was barring some coal out in the bottom when the top coal fell and injured him fatally. He was warned of the danger by his partner, but did not heed the warning.
18	Thomas Elliskie, .....	Polish,.....	Miner, .....	51	M.	1	....	Raymond, .....	Lackawanna, ...	Fatally injured by fall of coal which he left projecting over pillar he was robbing. He was warned about the dangerous condition but did not protect himself against it.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 5	Lewis Posaish, .....	Polish, .....	Driver, .....	24	S.	Clifford, .....	Susquehanna,...	Leg fractured by a loaded car that jumped over the head block and off the track.
16	Sidore Whaldine, .....	Italian, .....	Miner, .....	40	M.	Riverside, .....	Lackawanna,...	Leg fractured by a fall of roof near face of chamber.
19	Michael Mazala, .....	Russian, .....	Laborer, .....	25	S.	Erie, .....	Lackawanna,...	Hip dislocated by a fall of roof near face of chamber.
22	Alexander Fenton, .....	American, .....	Laborer, .....	24	S.	Coal Brook, .....	Lackawanna,...	Hand badly squeezed and two fingers cut off. Caught between car and prop.
27	Patrick McNulty, .....	American, .....	Brakeman, .....	17	S.	Coal Brook, .....	Lackawanna,...	Leg fractured at ankle. Caught between motor and empty car.
Feb. 1	Anthony Zecus, .....	Polish, .....	Driver, .....	20	S.	Clifford, .....	Susquehanna,...	Leg fractured at ankle by mule turning out while he was sitting on the bumper with one foot sliding along the rail.
2	John Martin, .....	American, .....	Miner, .....	31	M.	Jermyn, .....	Lackawanna,...	Leg caught by spreader and car.
6	Frank Scovits, .....	Austrian, .....	Miner, .....	61	M.	Clifford, .....	Susquehanna,...	Bruised internally by fall of coal at face of chamber after returning from firing a blast.
13	Joseph Clare, .....	Polish, .....	Driver, .....	20	S.	Coal Brook, .....	Lackawanna,...	Seriously injured about the body and limbs by fall of roof, while barring one foot.
19	James Whalen, .....	Irish, .....	Company laborer,...	54	M.	Clinton, .....	Lackawanna,...	Fractured leg while riding on bumper of car with foot sliding along rail.
21	William Burke, .....	American, .....	Laborer, .....	26	M.	Carbondale No. 1, .....	Lackawanna,...	His foot caught against a joint on the track.
24	Joseph Gallagher, .....	American, .....	Driver, .....	19	S.	North West, .....	Lackawanna,...	Fractured ankle by being struck by tail rope.
25	Joseph Rock, .....	Austrian, .....	Laborer, .....	23	S.	Glenwood, .....	Lackawanna,...	Back seriously injured by mine car. Fractured leg by falling off front of car.
March 1	Frank Cleary, .....	American, .....	Driver, .....	19	S.	Clinton, .....	Wayne, .....	Seriously injured about the body by fall of roof near face of chamber. Inside. Leg fractured and hip dislocated by being struck by loaded cars descending a plane.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
March	5 Patrick Scanlon, . . .	American, . . .	Driver, . . .	15	S.	White Oak, . . .	Lackawanna, . . .	Arm broken by being thrown from a mule. Outside.
19	John Cummings, . . .	American, . . .	Driver, . . .	19	S.	Powderly, . . .	Lackawanna, . . .	Leg injured by a car while running from chamber.
21	John Fallon, . . .	Irish, . . .	Miner, . . .	42	M.	Raymond, . . .	Lackawanna, . . .	Leg fractured by fall of roof while preparing to stand a prop near face of chamber.
April	30 Vincent Lester, . . .	Italian, . . .	Watchman, . . .	27	S.	Erle, . . .	Lackawanna, . . .	Leg fractured by railroad cars. Outside.
May	8 W. J. Pentecost, . . .	American, . . .	Propman, . . .	56	M.	Forest City, . . .	Susquehanna, . . .	Compound fracture of jaw by being struck by an empty trip of mine cars. Outside.
17	Angelo Rotal, . . .	Italian, . . .	Miner, . . .	45	M.	Riverside, . . .	Lackawanna, . . .	Head seriously injured by fall of roof near face of chamber.
24	Arthur Miller, . . .	American, . . .	Laborer, . . .	22	S.	Jernyn, . . .	Lackawanna, . . .	Leg fractured and body bruised by fall of roof after returning from firing a blast.
24	Stephen Trek, . . .	Russian, . . .	Driver, . . .	27	M.	Erle, . . .	Lackawanna, . . .	Bruised about the body by falling under a loaded car.
29	Joseph Duish, . . .	Polish, . . .	Laborer, . . .	24	S.	White Oak, . . .	Lackawanna, . . .	Hip and leg bruised by fall of roof near face of chamber.
June	6 William McManamin, . . .	American, . . .	Slatepicker, . . .	16	S.	Powderly, . . .	Lackawanna, . . .	Leg fractured by being caught in a conveyor. Outside.
9	Michael Hauchuck, . . .	Austrian, . . .	Miner, . . .	40	M.	Keystone, . . .	Lackawanna, . . .	Leg fractured at ankle by a mine car.
11	Thomas Bailey, . . .	English, . . .	Miner, . . .	42	M.	Clinton, . . .	Lackawanna, . . .	Leg and hand seriously injured by a blast of dynamite.
20	Bates Mateba, . . .	Polish, . . .	Laborer, . . .	27	S.	Forest City, . . .	Susquehanna, . . .	Leg broken by fall of roof near face of chamber.
July	10 John Surko, . . .	Slavonian, . . .	Laborer, . . .	39	M.	Forest City, . . .	Susquehanna, . . .	Leg fractured near ankle by fall of roof near face of chamber.
16	Wm. Boshovich, . . .	Lithuanian, . . .	Miner, . . .	31	M.	Clifford, . . .	Susquehanna, . . .	Compound fracture of ankle by fall of roof near face of chamber.
25	John Shensky, . . .	Russian, . . .	Driver, . . .	20	S.	Erle, . . .	Lackawanna, . . .	Leg fractured by flying coals from a blast. He did not heed the miner's warning.



July	25	Fred Arthur, .....	American,...	Motor brakeman,...	19	S.	Coal Brook, .....	Lackawanna,...	Seriously injured about the body and legs by a motor he was riding. He struck his head against the top roof and fell, fracturing the motor.
	31	Sylvester Douthivus, ...	Lithuanian,...	Laborer, .....	26	S.	Clifford, .....	Susquehanna,...	Seriously injured about the body by fall of roof while loading a car near face of chamber. His miner was near him the danger, but he did not heed him.
Aug.	6	William Milman, .....	Polish,.....	Miner, .....	56	S.	White Oak, .....	Lackawanna,...	Compound fracture of leg by flying coals from a premature blast.
	23	Joseph Buchinski, ....	Polish,.....	Miner, .....	45	M.	North West, .....	Lackawanna,...	Seriously injured about the face by flying coals while trying to fire two holes at the same time.
	30	James Mullaly, .....	American,...	Runner, .....	20	S.	Jermyn, .....	Lackawanna,...	Leg crushed between a motor and an empty car; amputation necessary.
Sept.	10	Alex. Rochskie, .....	Polish,.....	Miner, .....	33	M.	Black Diamond, ..	Lackawanna,...	Body bruised and ribs fractured by fall of roof.
	14	Simon Shurtock, .....	Polish,.....	Miner, .....	56	M.	Riverside, .....	Lackawanna,...	Right leg fractured and scalp wounded by flying coals from a blast.
	20	Frank Moeszr, .....	Austrian,...	Miner, .....	25	M.	Forest City, .....	Susquehanna,...	Arm fractured and back bruised by fall of roof near face of chamber.
	27	John Loidges, .....	Russian,....	Miner, .....	31	M.	Carbondale No. 1,	Lackawanna,...	Head and neck injured by being squeezed between a car and pillar.
	29	Joseph Wallace, .....	English,....	Miner, .....	54	M.	Coal Brook, .....	Lackawanna,...	Hand injured by fall of roof near face of chamber. Three fingers amputated.
	29	William Masters, ....	English,....	Laborer, .....	47	S.	Coal Brook, .....	Lackawanna,...	Leg fractured by fall of roof near face of chamber.
Oct.	15	Michael Carey, .....	American,...	Miner, .....	45	M.	Clinton, .....	Lackawanna,...	Seriously injured about the body and limbs by fall of roof at face of chamber.
	27	Joseph Ginger, .....	Polish,.....	Miner, .....	43	M.	North West, .....	Lackawanna,...	Ribs fractured and bruised about the body and limbs by fall of roof near face of chamber.
Nov.	21	Samuel Gentell, .....	Italian,.....	Miner, .....	25	S.	White Oak, .....	Lackawanna,...	Bruised about the back and left leg by fall of roof near face of chamber.
	27	George Jackson, .....	English,....	Miner, .....	30	M.	Clinton, .....	Lackawanna,...	Leg fractured by fall of roof near face of chamber.
Dec.	5	Andrew Wentovic, ....	Austrian,...	Miner, .....	45	M.	Morse Hill, .....	Lackawanna,...	Leg fractured by fall of roof while barring out a shot.
	12	Joseph Talerico, .....	Italian,.....	Slatepicker, .....	52	M.	Coal Brook, .....	Lackawanna,...	Part of foot cut off by a culm car while crossing a culm plane. Outside.
	22	Michael Moran, .....	American,...	Miner, .....	56	M.	White Oak, .....	Lackawanna,...	Head and shoulders injured by fall of roof near face of pillar.
	22	Peter Ziourbroni, .....	Italian,.....	Laborer, .....	22	S.	White Oak, .....	Lackawanna,...	Leg fractured by a piece of coal which fell off a car running from chamber.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

The number of fatal accidents reported during the year was 23. Nineteen, or 82.6 per cent. of the fatal accidents occurred inside the mines, and 4, or 17.4 per cent., outside. There was a decrease of 10, or 47.62 per cent. in the number of fatal accidents from falls of coal and roof, from the year 1905. Falls of coal and roof caused 57.89 per cent. of the number of accidents inside; mine cars 26.31 per cent.; dynamite and premature blasts 15.8 per cent. Breaker machinery caused 50 per cent. of the number of accidents outside; and cars and miscellaneous causes 50 per cent.

Erie Colliery, January 29, Joseph Sawvich, Polish, miner, was fatally injured by a fall of roof near face of chamber.

White Oak Colliery, March 1, Samuel Fasio, Italian, laborer, was fatally injured by a fall of roof while loading a car near face of chamber.

No. 2 Forest City Colliery, March 14, Stanley Mehulski, Polish, laborer, was fatally injured by a fall of roof while loading a car. The piece that fell was projecting over the pillar that was being taken out.

No. 1 Carbondale Colliery, March 27, Casper Kowash, Polish, miner, was fatally injured by a fall of roof. He was removing pillars and was standing under the piece that fell, watching the roof, while his laborers were loading a car.

Northwest Colliery, June 25, Frank Lascoski, Polish, laborer, was fatally injured by a fall of coal while loading a car near the face when pillar was being removed.

Forest City Colliery, June 27, Anthony Bolefski, Lithuanian, laborer, was fatally injured by a fall of roof while loading a car of coal near face of pillar that was being robbed.

Raymond Colliery, August 7, John Dulskey, Polish, laborer, was fatally injured by a fall of roof near face of chamber while loading a car of coal.

Raymond Colliery, September 4, Joseph Krousha, Polish, laborer, was fatally injured by a fall of roof while shoveling coal from right rib of chamber to car. From the information received during the investigation, it appears that the place had not been examined carefully.

Erie Colliery, September 17, William Barlach, Russian, miner, was fatally injured by a fall of roof while barring out a shot on pillar that he was robbing.

Raymond Colliery, December 15, Patrick Duffy, Irish, miner, was fatally injured by a fall of coal while barring out a shot in bottom at face of chamber.

Raymond Colliery, December 18, Thomas Billskie, Polish, miner, was fatally injured by a fall of coal. He was robbing pillars and let this piece of coal project over pillar, and while getting ready to drill a hole the piece fell and killed him.

## Cars

Coal Brook Colliery, January 12, Anthony McGuire, American, tailrope trip rider, was fatally injured by falling under the trip of loaded cars in some unknown manner.

Forest City Colliery, March 22, Julius Zeliski, Lithuanian, miner, was badly squeezed by an empty car. He was assisting to lift a car on the track, and the mule detached the spreader from the car by kicking, and it ran back against Zeliski and squeezed him so badly that he died 12 hours later.

Forest City Colliery, June 30, John Gidish, Polish, driver, was fatally injured in an unknown manner. It is supposed he was kicked by a mule and fell under the side of trip of loaded cars. There was ample room on each side of the cars.

No. 1 Carbondale Colliery, July 20, William Eastlake, American, laborer, was fatally injured by being caught between two loaded cars at foot of slope.

Clifford Colliery, August 10, Lewis Posvoish, Polish, miner, was fatally injured while crossing between a trip of loaded cars on his way home. The cars were bumped from behind and caught him. He died on the 14th of August.

Coal Brook Colliery, September 26, Gabreil Cerra, Italian, outside laborer, was fatally injured in an unknown manner by mine cars outside, while acting as brakeman.

### Blasts

Forest City Colliery, February 12, Frank Rybosh, Austrian, laborer, was fatally injured by flying coal from a blast. The miner who fired the blast failed to give him warning. He died March 10 at Emergency Hospital.

Jermyn Colliery, November 8, John Zonaski, Russian, laborer, was fatally injured by flying coals from a blast, which he fired in the absence of his miner. He was found lying nearly in the cross-cut in an unconscious condition. The cross-cut was 83 feet from face of chamber.

### Powder and Dynamite

Finn Colliery, June 16, Samuel Faric, Russian, miner, was cleaning the "blasting" barrel. He put a squib in it and ignited it. The squib flew back from the barrel to his powder, which was close by, and ignited the powder with a few sticks of dynamite. Faric's clothing caught fire and he was burned so badly that he died.

### Machinery

Northeast Colliery, November 10, George Wengrin, Russian, slate-picker boy, was fatally injured by being squeezed between a screen and the chute under the screen. The jury rendered a verdict of accidental death.

Raymond Colliery, November 17, Frank Montour, Italian, sweeper, was fatally injured by being caught in an unknown manner between a belt pulley and plank platform. An inquest held on these accidents rendered a verdict of accidental death.

### Miscellaneous

Raymond Colliery, November 21, Vincent Polish, American, driver, was fatally injured by a mule he was taking to the barn. He was thrown from the mule's back and was caught in the harness and dragged about a half mile to the barn.



## CONDITION OF COLLIERIES AND IMPROVEMENTS

## DELAWARE AND HUDSON COMPANY

Clinton Colliery.—A new slope was sunk from the surface to the Grassy vein, distance on pitch 1,800 feet. Coal hoisted to the surface by a pair of 14x20 Flory engines using tail rope system. Breaker has been overhauled and a new trestle 300 feet in length to head of breaker has been completed. Condition of mine roads good; drainage good; ventilation fair.

Coal Brook Colliery.—One six-ton electric motor has been added, making 8 air motors and 7 electric in use pulling coal, and one Turbine pump driven by an electric motor and delivering 2,500 gallons of water per minute to surface, has been added to equipment. A new opening to Grassy vein on the company farm connected by railroad 3,000 feet in length has been made. Also one new 16 ton mine locomotive for pulling coal from opening has been added. Ventilation fair; other conditions good.

No. 1 Carbondale Colliery.—New engine plane on east side No. 1 slope, 1,200 feet in length, delivering cars to foot of slope haulage road north of No. 3 shaft, has been rebuilt pulling cars to foot of No. 1 slope distance about 4,000 feet. Condition of colliery, ventilation, roads and drainage, good.

Powderly Colliery.—Locomotives has been placed on east side, pulling coal from Grassy opening to head of plane, a distance of 3,000 feet. Electric lights have been placed in breaker office and buildings. Ventilation fair; other conditions good.

Jermyn Colliery.—New 6-ton electric motor added for pulling coal, and one pair of 10x12 engines delivering supplies from surface to foot of shaft, a distance of 1,800 feet. A new washery, capacity 800 tons per day, equipped with the latest improved machinery, is near completion. Ventilation in many places is bad; other conditions good.

White Oak Colliery.—Slope driven through anticlinal 900 feet in length. Condition of colliery, fair.

## HILLSIDE COAL AND IRON COMPANY

Clifford Colliery.—A tail rope and engine plane combination haulage system has been installed. A transmission line has been run from the power house at No. 2 shaft over a mile away and through bore hole from the surface to the south section of Dunmore vein, for the purpose of haulage and pumping. One motor and one electric pump have been installed there. Condition of colliery, fair.

No. 2 Shaft Colliery.—A new fire-proof boiler house has been erected. One turbine pump of one thousand gallons capacity driven by electricity, and two triplex plunger pumps of 600 gallons capacity each driven by electricity, have been installed in the Clark vein, the water being delivered to surface through boreholes. A saw mill has been erected, driven by steam power, for the purpose of cutting all prop timber, which is extensively used on account of so much robbing being done. A tunnel has been driven from the bottom Dunmore vein to the second one overlying the bottom, the distance between being 16 feet vertical, the length of tunnel 450 feet the area 6 feet by 10 feet. Condition of colliery, fair.

Erie Colliery.—A slope is being driven in the New County vein 6x12 feet in area, from head of Rock Plane towards the basin; its length is now 400 feet. Two 10x18 hoisting engines, formerly used in the Clark vein, have been installed, and the slope is continuing toward the outcrop as an engine plane. A  $7\frac{1}{2}$  ton chamber haulage electric motor has been installed on the west rise in New County vein. Ventilation good, drainage and safety fair.

Glenwood Colliery.—A Jeanesville Duplex Plunger pump, 24x12x-18, has been installed, delivering water from Clark vein to surface. Condition of colliery, fair.

#### SCRANTON COAL COMPANY

Raymond Colliery.—The main shaft was sunk from the Clark vein to the Dunmore vein, a distance of 90 feet, cutting a vein  $3\frac{1}{2}$  feet of coal of good quality. Two slopes have been sunk to the New County vein, thereby increasing the output of that vein. The general condition of the colliery is good.

Riverside Colliery.—Condition fair.

Black Diamond Colliery.—Ventilation good, other conditions, fair.

#### NORTHWEST COAL COMPANY

Northwest Colliery.—Ventilation, bad. Other conditions, fair.

#### FINN COAL COMPANY

Finn Colliery.—General condition, fair.

#### CARBONDALE COAL MINING COMPANY

Carbondale.—New slope in progress of sinking from surface to Dunmore vein; length at present 150 feet. General condition, fair.

#### MORSS HILL COAL COMPANY

Morss Hill Colliery.—Installed two Lehigh jigs with 20 horse power upright engines for operating same. One new 150 horse power tubular boiler; one 50 ton track scales enlarged screen and shaker capacity. Re-timbered the breaker; built new mule barn, blacksmith shop and oil house; new railroad switch from Erie main line to breaker. Inside.—New slope from surface to 3 feet vein. The condition of mine improved generally.

#### NORTHEAST COAL COMPANY

Northeast Colliery.—A new breaker erected, equipped with the latest improved machinery; capacity 600 tons daily. Two new boilers, tubular type, 90 horse power each, new boiler-room, office and weigh scales, new 12 foot ventilating fan, Guibal type. Condition of mine, fair.

#### CLINTON FALLS COAL COMPANY

Clinton Falls Colliery.—General condition of mine, fair.

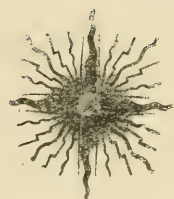
#### SUNNY SIDE COAL COMPANY

Sunny Side Colliery.—General condition of mine, fair.

#### EAST MOUNTAIN COAL COMPANY

East Mountain.—Condition of mine, fair.





## Second District

LACKAWANNA COUNTY

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Scranton, Pa., February 27, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report for the Second Anthracite Inspection District, for the year ending December 31, 1906.

Respectfully submitted,  
L. M. EVANS,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	13
Number of mines, .....	33
Number of mines in operation, .....	23
Number of tons of coal shipped to market, .....	3,233,796
Number of tons used at mines for steam and heat, .....	327,324
Number of tons sold to local trade and used by employes, .....	33,914
Number of tons produced, .....	3,595,034
Number of persons employed inside of mines, .....	7,214
Number of persons employed outside, .....	2,418
Number of fatal accidents inside of mines, .....	22
Number of fatal accidents outside, .....	4
Number of non-fatal accidents inside of mines, .....	26
Number of non-fatal accidents outside, .....	5
Number of tons of coal produced per fatal accident inside, .....	163,410
Number of persons employed per fatal accident inside, ..	327
Number of persons employed per fatal accident outside, ..	604
Number of persons employed per non-fatal accident inside, .....	277
Number of persons employed per non-fatal accident outside, .....	483
Number of wives made widows, .....	15
Number of children orphaned, .....	29
Number of steam locomotives used inside of mines, .....	4
Number of steam locomotives used outside, .....	29
Number of compressed air locomotives used inside, .....	8
Number of electric motors used inside, .....	20
Number of fans in use, .....	22
Number of gaseous mines in operation, .....	15
Number of non-gaseous mines in operation, .....	10

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Seranton Coal Company, .....	723,497
Delaware, Lackawanna and Western Railroad Company,	647,883
Delaware and Hudson Company, .....	563,399
Sterrick Creek Coal Company, .....	472,834
Pennsylvania Coal Company, .....	469,212
Dolph Coal Company, .....	290,897
Lackawanna Coal Company, Limited, .....	220,940
Mt. Jessup Coal Company, .....	108,609
Moosic Mountain Coal Company, .....	97,763
Total, .....	<u>3,595,034</u>

## Production by Counties

Lackawanna, .....	<u><u>3,595,034</u></u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Scranton Coal Co.,	8	.....	8	7	1	8	90,437	103,356	1,922	729	2,631	237	.....	271	729
D., L. and W. R. R. Co.,	2	.....	2	7	.....	7	323,941	92,554	1,196	242	1,438	558	.....	170	271
Delaware and Hudson Co.,	2	.....	2	2	.....	2	281,609	281,639	1,099	358	1,387	514	.....	179	358
Stierick Creek Coal Co.,	4	.....	4	4	1	5	118,298	118,298	689	205	894	172	.....	316	205
Pennsylvania Coal Co.,	.....	.....	.....	3	.....	3	.....	156,404	950	242	1,192	.....	.....	.....	.....
Dolph Coal Co.,	1	1	2	3	1	4	290,897	.....	410	260	670	410	280	.....	260
Lackawanna Coal Co., Limited,	3	1	4	2	.....	2	73,646	110,470	507	189	696	169	189	253	189
Mt. Jessup Coal Co.,	1	.....	1	1	1	2	108,609	108,609	312	151	463	312	.....	512	151
Moosic Mountain Coal Co.,	1	.....	1	.....	.....	.....	97,763	.....	219	42	261	219	.....	.....	42
Totals and averages for district,	22	4	26	26	5	31	163,410	138,270	7,214	2,418	9,632	327	604	277	483



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	3	13.63
Falls of roof, .....	1	.....	.....	.....	1	2	2	1	.....	2	1	1	11	50.00
Mine cars, .....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	3	13.63
Explosions of gas and dust, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	4.55
Premature blasts, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	2	9.09
Falling into shafts, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1	4.55
Miscellaneous, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	4.55
Totals, .....	3	.....	.....	.....	2	3	3	2	1	3	1	4	22	100.00
Causes of Accidents Outside														
Cars, .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	2	50.00
Machinery, .....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	25.00
Miscellaneous, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	25.00
Totals, .....	.....	1	1	.....	.....	.....	1	.....	.....	.....	1	.....	4	100.00
Grand totals inside and outside, .....	3	1	1	.....	2	3	4	2	1	3	2	4	26	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....						1	1		1			1	4	15.39
Falls of slate, .....			1										1	3.85
Falls of roof, .....		2						2	2				6	23.07
Mine cars, .....						1	1	1	1	1		1	6	23.07
Explosions of gas and dust, .....	1						1						2	7.69
Premature blasts, .....			1		2	1						1	5	19.23
By mules, .....											1		1	3.85
Machinery, .....							1						1	3.85
Totals, .....	1	2	2		2	3	4	3	4	1	1	3	26	100.00
Causes of Accidents Outside														
Cars, .....						1				1			2	40.00
Machinery, .....										1			1	20.00
Miscellaneous, .....	1						1						2	40.00
Totals, .....	1					1	1			2			5	100.00
Grand totals inside and outside, .....	2	2	2		2	4	5	3	4	3	1	3	31	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	2	.....	.....	.....	1	2	1	1	.....	1	1	2	11
Miners' laborers, .....	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	1	4
Drivers and runners, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Doorboys and helpers, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
Pumpmen, .....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1
Company men, .....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	2
All other employees. ....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Totals, .....	3	.....	.....	.....	2	3	3	2	1	3	1	4	22
Outside													
Slatepickers (boys), .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
All other employees, .....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....	3
Totals, .....	.....	1	1	.....	.....	.....	1	.....	.....	.....	1	.....	4
Grand totals inside and outside, ....	3	1	1	.....	2	3	4	2	1	3	2	4	26

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....			2		2	2			4			2	12
Miners' laborers, .....		2					2	1		1			6
Drivers and runners, .....								2			1		5
Pumpmen, .....	1										1	1	3
Company men, .....						1	1						2
Totals, .....	1	2	2		2	3	4	3	4	1	1	3	26
Outside													
Slatepickers (boys), .....										1			1
All other employees, .....	1					1	1			1			4
Totals, .....	1					1	1			2			5
Grand totals inside and outside, ....	2	2	2		2	4	5	3	4	3	1	3	31

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	1									1		1	3
Welsh, .....					1			1					2
German, .....			1			1			1				3
Polish, .....							2	1				2	6
Hungarian, .....							1						1
Italian, .....							1			2			5
Slavonian, .....	1					1					2	1	5
Austrian, .....					1	1							2
Totals, .....	3	1	1		2	3	4	2	1	3	2	4	26

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....	1					2					1	1
Welsh, .....			1					1	1		1	
Irish, .....					1	2						
German, .....	1					1	1	1	1	1		1
Polish, .....		1				1	1	1	1			1
Hungarian, .....						1						
Italian, .....			1		1		2	1				1
Slavonian, .....									1			
Russian, .....		1								2		
Totals, .....	2	2	2		2	4	5	3	4	3	1	3

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Sycanton Coal Co.	Shaft,...	Gaseous,	Fan,...	30	10	8	50	1.6	Gulbal,...	Steam, ...	8	210,525	148,495	218,125	302	492
	Johnson No. 1, .....	Gaseous,	Fan,...	18	5	6	112	1.6	.....	.....	5	90,150	66,675	107,500	276	242
	Johnson No. 2, .....	Gaseous,	Fan,...	30	10	8	40	.8	.....	.....	6	154,800	139,350	168,000	238	585
	Richmond No. 3, .....	Gaseous,	Fan,...	30	10	8	40	.8	.....	.....	6	154,800	139,350	168,000	238	585
	Richmond No. 3, .....	Gaseous,	Fan,...	30	10	8	40	.8	.....	.....	6	154,800	139,350	168,000	238	585
D., L. and W. R. R. Co.	Shaft,...	Gaseous,	Fan,...	14	4	3½	98	1.5	.....	.....	8	146,490	125,400	153,590	294	426
	Storrs No. 1, .....	Gaseous,	Fan,...	16	6	4	108	1.5	.....	.....	9	178,447	162,835	187,522	398	409
	Storrs No. 2, .....	Gaseous,	Fan,...	16	6	4	103	1.0	.....	.....	6	85,896	65,248	116,823	252	259
	Storrs No. 3, .....	Gaseous,	Fan,...	16	6	4	103	1.0	.....	.....	6	85,896	65,248	116,823	252	259
	Storrs No. 3, .....	Gaseous,	Fan,...	16	6	4	103	1.0	.....	.....	6	85,896	65,248	116,823	252	259
Delaware and Hudson Co. Eddy Creek Colliery	Shaft,...	Gaseous,	Fan,...	22	5	5½	90	2.5	.....	.....	8	164,730	131,335	181,680	279	470
	No. 2 shaft, .....	Gaseous,	Fan,...	28	7	8	60	.5	.....	.....	5	68,100	57,380	72,550	140	409
	Grassy Island, .....	Gaseous,	Fan,...	8	3	2½	125	2.0	.....	.....	2	31,030	30,080	34,580	84	385
	No. 4 drift, .....	Gaseous,	Fan,...	10	3½	2	300	1.0	.....	Electricity	1	26,730	20,140	31,010	63	319
	Birds Eye, Clark vein, ..	Non-gas.	Fan,...	8	3	2	200	2.0	.....	Electricity	2	48,560	36,720	46,460	91	403
Sterrick Creek Coal Co.	Drift,...	Non-gas.	Fan,...	8	3	2	200	2.0	.....	.....	2	48,560	36,720	46,460	91	403
	Birds Eye, New County vein, ..	Non-gas.	Fan,...	8	3	2	200	2.0	.....	.....	2	48,560	36,720	46,460	91	403
Sterrick Creek	Shaft,...	Gaseous,	Fan,...	25	5	5½	70	2.0	.....	.....	2	53,600	44,400	54,200	140	317
	Drift,...	Non-gas.	Fan,...	16	4½	4½	45	1.0	.....	.....	3	68,100	60,700	68,100	130	319





TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Scranton Coal Co. Johnson, ..... Ontario, ..... Richmond No. 3, ..... }	Lackawanna, ...	John R. Bryden, ...	Scranton, ...	William L. Allen, ...	Peckville, ...	N. Y., O. and W.
D., L. and W. R. R. Co. Storrs, ..... }	Lackawanna, ...	R. A. Phillips, ...	Scranton, ...	Walter Reese, ...	Scranton, ...	D., L. and W.
Delaware and Hudson Co. Eddy Creek, ..... }	Lackawanna, ...	C. C. Rose, ...	Scranton, ...	E. R. Pettebone, ...	Dorranceton, ...	D. and H.
Sterrick Creek Coal Co. Sterrick Creek, ..... }	Lackawanna, ...	F. H. Hemelright, ...	Scranton, ...	Joseph Reese, ...	Olyphant, ...	Erie
Pennsylvania Coal Co. No. 1 colliery, ..... Gipsy Grove, ..... No. 1 washery, ..... }	Lackawanna, ...	William W. Inglis, ...	Scranton, ...	John W. Reid, ...	Dunmore, ...	Erie
Dolph Coal Co. Dolph, ..... }	Lackawanna, ...	W. G. Robertson, ...	Scranton, ...	.....	.....	Erie
Lackawanna Coal Co., Limited Lackawanna, ..... }	Lackawanna, ...	F. H. Hemelright, ...	Scranton, ...	Joseph Reese, ...	Olyphant, ...	D., L. and W.
Mt. Jessup Coal Co. Mt. Jessup, ..... }	Lackawanna, ...	John T. Cartwright, ...	Winton, ...	.....	.....	D., L. and W. and N. Y., O. and W.
Moosic Mountain Coal Co. Marshwood, ..... }	Lackawanna, ...	Charles P. Ford, ...	Marshwood, ...	.....	.....	D., L. and W. and N. Y., O. and W.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries		County															
				Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules			
Scranton Coal Co.																	
Johnson, .....	{	Lackawanna, {	342,288	43,000	4,775	390,063	182	1,184	5	4	13,433	28,012	103				
Ontario, .....			175,469	24,000	1,370	200,839	153	990	2	3	9,524	67,185	90				
Richmond No. 3, .....			117,937	12,775	1,883	132,595	156	437	1	1	4,500	1,800	43				
Totals, .....			635,694	79,775	8,028	723,497	.....	2,621	8	8	27,462	96,997	242				
D., L. and W. R. R. Co.																	
Storrs, .....	{	Lackawanna, {	580,808	61,547	5,528	647,882	200	1,438	2	7	25,789	20,889	85				
Delaware and Hudson Co.																	
Eddy Creek, .....			450,269	64,617	4,668	519,584	215	1,338	4	2	22,585	8,215	55				
Grassy Island washery, .....			36,515	7,360	.....	43,815	149	49	.....	.....	.....	.....					
Totals, .....			486,814	71,917	4,668	562,399	.....	1,387	4	2	22,585	8,215	55				
Sterrick Creek Coal Co.																	
Sterrick Creek, .....	{	Lackawanna, {	434,910	35,024	2,900	472,834	197	894	4	5	15,125	23,340	91				
Pennsylvania Coal Co.																	
No. 1 colliery, .....			320,898	5,189	1,831	327,918	178	878	.....	.....	14,541	12,980	66				
Gipsy Grove, .....	{	Lackawanna, {	132,037	.....	.....	132,037	170	302	.....	4	5,807	2,090	37				
No. 1 washery, .....			9,257	.....	.....	9,257	37	12	.....	.....	.....	.....					
Totals, .....			462,192	5,189	1,831	469,212	.....	1,192	.....	4	20,348	15,070	103				
Dolph Coal Co.																	
Dolph, .....		Lackawanna, ...	204,772	25,000	1,125	290,897	205	670	2	1	11,410	11,500	57				

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lackawanna Coal Co., Limited	Lackawanna, ...	100,535	23,672	6,732	220,940	174	696	4	2	10,531	26,843	78
Lackawanna, ...	Lackawanna, ...											
Mt. Jessup Coal Co.	Lackawanna, ...	88,020	18,040	1,580	108,000	201	463	1	2	4,006	14,672	45
Mt. Jessup, ...	Lackawanna, ...											
Moosic Mountain Coal Co.	Lackawanna, ...	89,051	7,200	1,512	97,763	185	261	1	.....	3,950	2,400	45
Marshwood,*	Lackawanna, ...											
Grand totals.	.....	3,923,796	327,324	33,914	3,595,034	.....	9,632	26	31	141,766	219,926	801

\*Prepared at Mt. Jessup breaker.

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Scranton Coal Co., .....	Lackawanna.	637,694	79,775	8,428	732,497	2,631	8	8	27,962	96,997	242
D., L. and W. R. R. Co., .....		589,808	61,547	4,528	641,883	1,638	2	2	257,780	20,889	85
Delaware and Hudson Co., .....		439,814	71,917	9,668	511,399	1,357	4	4	22,585	8,215	55
Sterrick Creek Coal Co., .....		453,916	35,624	2,620	477,534	1,894	4	5	15,126	23,340	91
Pennsylvania Coal Co., .....		462,192	5,180	1,821	473,913	1,192	.....	4	20,348	15,070	103
Dolph Coal Co., .....		204,152	23,780	1,195	229,897	1,670	2	1	11,410	11,500	57
Lackawanna Coal Co., Limited, .....		186,455	23,672	6,723	229,940	636	4	2	10,531	26,843	78
Mt. Jessup Coal Co., .....		87,006	18,006	1,589	108,999	463	4	2	4,066	14,672	45
Moosic Mountain Coal Co., .....		88,051	7,260	1,512	97,763	251	1	.....	2,950	2,400	45
Totals, .....		3,293,796	327,324	33,914	3,595,034	9,672	26	31	141,766	219,925	801

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Scranton Coal Co., .....	Lackawanna, ...	25	655	26	3,070	3,725	8	.....	4	4,246	14	8,880	7,030	5	1
Do. L. and W. R. R. Co., .....		5	625	8	2,400	3,025	4	.....	15	2,510	3	2,160	1,150	5	.....
Delaware and Hudson Co., .....		27	746	13	2,725	3,471	5	8	.....	4,446	8	10,260	4,900	3	5
Sterrick Creek Coal Co., .....		12	480	6	1,300	1,780	6	.....	16	2,040	4	2,674	2,100	1	.....
Pennsylvania Coal Co., .....		.....	.....	12	1,600	1,600	3	.....	25	1,485	5	2,674	1,464	1	.....
Dolph Coal Co., .....		4	80	8	1,345	1,425	3	.....	28	1,247	6	1,563	1,460	3	.....
Lackawanna Coal Co., Limited, .....		.....	.....	8	2,060	2,060	1	.....	1	2,100	9	10,500	4,600	1	.....
Mt. Jessup Coal Co., .....		14	1,050	14	1,050	1,050	2	.....	17	2,100	4	3,200	1,600	1	.....
Moosic Mountain Coal Co., .....		3	120	3	189	300	1	.....	4	105	2	3,800	1,450	1	.....
Totals, .....		76	2,706	98	15,730	18,436	33	8	20	19,184	54	43,924	23,594	19	15



TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employes	Total outside
Scranton Coal Co.																						
Johnson, .....	Lackawanna,.....	2	2	4	985	275	147	55	16	.....	112	898	1	1	18	34	40	52	2	138	286	
Ontario, .....		1	4	3	310	170	80	13	8	.....	82	669	1	2	13	36	61	67	61	2	145	
Richmond No. 3, .....		1	.....	.....	101	71	77	16	3	.....	60	335	1	1	7	23	25	24	1	40	122	
Totals, .....		5	6	7	699	516	304	84	27	.....	254	1,902	3	4	38	87	126	143	5	323	729	
D., L. and W. R. R. Co.																						
Storrs, .....	Lackawanna,.....	3	3	9	406	420	104	21	6	152	72	1,196	.....	2	14	26	74	8	3	115	242	
Delaware and Hudson Co.																						
Eddy Creek, .....	Lackawanna,.....	3	4	4	351	412	124	16	6	109	.....	1,029	.....	2	12	37	39	58	5	165	309	
Grassy Island washery, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	4	14	1	1	27	49	
Totals, .....		3	4	4	351	412	124	16	6	109	.....	1,029	.....	3	13	41	44	59	6	192	358	
Sterrick Creek Coal Co.																						
Sterrick Creek, .....	Lackawanna,.....	2	1	1	246	233	91	28	3	79	5	689	1	1	8	21	52	7	3	112	295	
Pennsylvania Coal Co.																						
No. 1 colliery, .....	Lackawanna,.....	2	1	1	294	214	106	10	1	62	39	731	.....	1	7	14	34	21	2	68	147	
Gipsy Grove, .....		1	1	.....	95	63	40	6	.....	13	.....	219	.....	2	2	2	32	8	1	38	83	
No. 1 washery, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	10	12	
Totals, .....		3	3	1	389	277	146	16	1	75	39	950	.....	1	10	17	65	29	3	116	242	
Dolph Coal Co.																						
Dolph, .....	Lackawanna,.....	2	.....	.....	201	99	65	10	3	17	13	410	1	1	17	23	36	84	7	91	260	

TABLE 3.—Continued

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foreman	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lackawanna Coal Co., Limited	Lackawanna	2	1	1	172	137	61	14	8	50	61	507	1	1	17	16	42	15	2	95	189	696
Lackawanna, .....	Lackawanna																					
Mt. Jessup Coal Co.	Lackawanna	1	1	2	109	76	38	7	10	49	19	312	1	2	8	22	54	.....	3	61	151	463
Mt. Jessup, .....	Lackawanna																					
Moosic Mountain Coal Co.	Lackawanna	1	1	....	70	61	46	14	2	15	9	219	1	....	7	8	.....	.....	1	25	42	261
Marshwood, .....	Lackawanna																					
Grand totals, .....		22	50	25	2,643	2,231	979	210	66	546	472	7,214	8	15	132	261	494	345	33	1,139	2,418	9,682

TABLE 3.—Recapitulation

Scranton Coal Co., .....	5	6	7	689	516	304	84	27	.....	254	1,902	3	4	38	87	126	143	5	323	729	2,631
D. L. and W. R. Co., .....	3	3	9	406	420	104	21	6	152	72	1,196	....	2	14	26	74	8	3	115	242	1,438
Delaware and Hudson Co., .....	3	4	4	351	412	124	16	6	109	.....	1,029	....	3	13	41	44	59	6	192	358	1,387
Sterrick Creek Coal Co., .....	3	1	1	246	232	91	28	3	79	5	689	....	1	8	21	52	7	3	112	295	894
Pennsylvania Coal Co., .....	3	1	1	389	277	146	16	1	75	39	950	....	1	10	17	66	29	3	116	242	1,192
Dolph Coal Co., .....	2	1	1	172	137	65	10	3	17	13	410	....	1	17	23	36	84	7	91	260	670
Lackawanna Coal Co., Limited,	2	1	1	172	137	65	17	8	50	61	507	1	1	17	16	42	15	2	95	189	696
Mt. Jessup Coal Co., .....	1	2	1	109	76	38	7	10	49	19	312	1	2	8	22	54	.....	3	61	151	463
Moosic Mountain Coal Co., .....	1	1	....	70	61	46	14	2	15	9	219	1	....	7	8	.....	.....	1	25	42	261
Totals, .....	22	20	25	2,643	2,231	979	210	66	546	472	7,214	8	15	132	261	494	345	33	1,130	2,418	9,682

TABLE 3. —PART 2

Names of Operators	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Scranton Coal Co.														
Johnson, .....	{ Lackawanna,....	16	11	18	.....	10	20	21	17	16	16	19	18	182
Ontario, .....		14	10	20	.....	12	22	21	22	19	13	.....	.....	153
Richmond No. 3, .....		14	11	18	.....	11	17	16	12	11	13	16	17	156
D., L. and W. R. R. Co.														
Storrs, .....	Lackawanna,....	17	15	21	.....	14	22	20	15	18	21	19	18	200
Delaware and Hudson Co.														
Eddy Creek, .....	{ Lackawanna,....	20	18	23	3	19	21	20	20	15	17	19	20	215
Grassy Island washery, .....		.....	.....	4	21	24	11	.....	.....	22	24	21	22	149
Sterrick Creek Coal Co.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sterrick Creek, .....	Lackawanna,....	17	14	17	.....	13	21	21	20	14	20	22	18	197
Pennsylvania Coal Co.														
No. 1 colliery, .....	{ Lackawanna,....	16	12	16	.....	10	22	19	14	15	20	19	15	178
Gipsy Grove, .....		16	12	16	.....	9	21	18	14	14	18	16	16	170
No. 1 washery, .....		.....	.....	.....	23	14	.....	.....	.....	.....	.....	.....	.....	37
Dolph Coal Co.														
Dolph, .....	Lackawanna,....	20	19	22	.....	10	20	17	20	18	20	20	19	205
Lackawanna Coal Co., Limited														
Lackawanna, .....	Lackawanna,....	16	15	18	.....	10	17	17	17	16	16	17	15	174
Mt. Jessup Coal Co.														
Mt. Jessup, .....	Lackawanna,....	19	18	21	.....	11	18	17	19	18	21	21	18	201

TABLE 4.—Fatal accidents inside and outside of mines

Date of Accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	Paul Duncovich, .....	Slavonian,....	Miner, .....	36	M.	1	2	Eddy Creek, .....	Lackawanna,...	Fatally injured by fall of roof. The laborer testified that the miner knew the roof was unsafe but neglected to take it down.
9	Joseph Rose, .....	Italian,.....	Helper, ....	16	....	....	....	Ontario, .....	Lackawanna,...	Fatally injured by cars. While walking up to the mule's head he was squeezed between the car and a prop and his hip was injured. There was sufficient room on the other side. Died at the hospital January 25.
11	Salvatore Frelche, ..	Italian,.....	Miner, .....	40	M.	1	3	Sterrick Creek, ....	Lackawanna,...	Fatally injured by fall of rib coal. He was barring down loose stuff after a blast when a piece fell, fracturing his hip and injuring his body. He died at the hospital February 1.
Feb. 19	Howard Toothill, .....	American,....	Jig boy, ...	18	....	....	....	Lackawanna, .....	Lackawanna,...	Killed instantly in the breaker. He was connecting the belt of fan of his own contrivance to the belt of shaft where he was working and his clothes were caught.
March 13	Andrew Smith, .....	Polish,.....	Laborer, ....	23	S.	....	....	Eddy Creek, .....	Lackawanna,...	Fatally injured by cars outside. He was riding home from work between the bumpers, when he fell under the cars.
May 7	John Hughes, .....	Welsh,.....	Com. man, 59	59	M.	1	....	Storrs, .....	Lackawanna,...	Died from burns caused by an explosion of gas. He disobeyed the orders of the foreman and went into a place that had not yet been examined that morning and encountered a body of gas. Died at the hospital May 16.
28	John Deblitz, .....	Austrian,....	Miner, .....	56	S.	....	....	Lackawanna, .....	Lackawanna,...	Fatally injured by fall of roof. His laborer warned him that the roof was bad, but he neglected to take it down.
June 8	Stephen Tott, .....	Slavonian,...	Laborer, ...	35	M.	1	....	Sterrick Creek, ....	Lackawanna,...	Fatally injured by fall of roof in the face of a crosscut where he was loading a car. There was a treacherous slip in the coal.
13	George Brachock, .....	Austrian,....	Miner, .....	42	M.	1	7	Sterrick Creek, ....	Lackawanna,...	Fatally injured by fall of roof. There was a slip in the face of chamber.

June	27	Edward Amgher, .....	German, .....	Miner, .....	46	M. 1	6	Marshwood, .....	Lackawanna, ...	Fatally injured by blasting. He remained too long, thinking the fuse was not lighted.
July	11	John Furello, .....	Italian, .....	Laborer, ...	24	S. ....	.....	Ontario, .....	Lackawanna, ...	Killed by fall of bell roof that was very difficult to detect.
	13	Frank Fletcheo, .....	Hungarian, ...	Slate picker, 14	S. ....	S. ....	.....	Dolph, .....	Lackawanna, ...	He had been in swimming and came out to dress in a large box. He fell over the box into the dam and was drowned.
	19	Joseph Cotton, .....	Polish, .....	Miner, .....	38	M. 1	3	Richmond No. 3, ..	Lackawanna, ...	Fatally injured by fall of roof that he and another miner, with their laborers, were trying to secure.
	24	Joseph Smith, .....	Polish, .....	Footman, .. 21	S. ....	S. ....	.....	Storrs, .....	Lackawanna, ...	Killed on a mine cage. He gave the signal to hoist and discovered that the car was off. He then went to put the car on when the cage was taken away. The headman and an electrical engineer testified that they heard the signal given to hoist coal.
Aug.	4	David Parry, .....	Welsh, .....	Driver, .....	21	S. ....	.....	Lackawanna, .....	Lackawanna, ...	Killed by fall of roof while driving the mules out of the face. The miner testified that he had examined the roof that morning from the branch to the face and considered it safe.
	6	Walter Kazminer, ...	Polish, .....	Miner, .....	27	M. 1	4	Johnson, .....	Lackawanna, ...	Fatally injured by fall of top coal that contained a slip. He died the next day.
Sept.	24	John Coser, .....	German, .....	Com. man, 20	S. ....	S. ....	.....	Sterrick Creek, ....	Lackawanna, ...	Spine fractured by trying to mount the head end of a moving car when in mine. Died October 15.
Oct.	19	Frank Bailey, .....	American, ...	Pumpruner.	47	M. 1	.....	Johnson, .....	Lackawanna, ...	Instantly killed by falling down the shaft. After getting off the cage he stumbled and got in the dark and used all his matches, and in walking around the shaft he opened the gate and walked into the shaft.
	25	Jacob Caperary, .....	Italian, .....	Miner, .....	53	M. 1	.....	Dolph, .....	Lackawanna, ...	Fatally injured by fall of roof that he had failed to bar down.
	26	Joseph Salave, .....	Italian, .....	Laborer, ... 40	M. 1	M. 1	1	Mt. Jessup, .....	Lackawanna, ...	Fatally injured by fall of roof that he had failed to bar down.
Nov.	26	Peter Brownsowski, ...	Slavonian, ...	Shoveler, ... 50	M. 1	M. 1	2	Eddy Creek, .....	Lackawanna, ...	Killed by railroad cars, outside. The engine bumped the cars just as he was getting on to shovel some coal and he fell under the wheels.
	23	Paul Zoluski, .....	Slavonian, ...	Miner, .....	29	M. 1	.....	Johnson, .....	Lackawanna, ...	Killed by fall of roof while standing discharged props from a blast.
Dec.	6	Andrew Mettick, ....	Polish, .....	Miner, .....	31	S. ....	.....	Lackawanna, .....	Lackawanna, ...	Killed by blasting. He cut the match too short.
	7	Joseph Popovich, ....	Slavonian, ...	Miner, .....	26	M. 1	1	Eddy Creek, .....	Lackawanna, ...	Killed by fall of roof while he was assisting a fellow workman.
	19	Stephen Harwin, .....	American, ...	Doorboy, ... 16	.....	.....	.....	Johnson, .....	Lackawanna, ...	Killed by cars. He was along with the drivers and in getting on the bumpers he fell under the car.
	22	Charles Visneski, ....	Polish, .....	Laborer, ... 40	M. 1	M. 1	.....	Johnson, .....	Lackawanna, ...	Fatally injured by fall of roof. It was a very small piece and had not been detected.



TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 13	Henry Smith, .....	German,.....	Pumprunner, .....	34	M.	Johnson, .....	Lackawanna,...	Burned on the face and hands by an explosion of gas. He was forbidden to use a naked light where they were removing a large body of water.
22	David J. Vale, .....	American,...	Electrician, .....	31	S.	Sterrick Creek, ....	Lackawanna,...	Wrist fractured. He fell to the ground from a pole while he was cutting a wire. Outside.
Feb. 17	Thomas Schott, .....	Polish,.....	Laborer, .....	34	M.	Gipsy Grove, .....	Lackawanna,...	Leg and hip fractured by fall of roof while loading a car. It was a small piece that had not been detected.
27	Daniel Shoppa, .....	Russian,.....	Laborer, .....	21	M.	Lackawanna, .....	Lackawanna,...	Injured on chest and leg fractured by fall of roof that gave no indication of coming.
March 5	William E. Davis, ....	Welsh,.....	Miner, .....	45	M.	Eddy Creek, .....	Lackawanna,...	Initial about the abdomen by blasting. He thought the squib had missed and returned too soon.
16	Joseph Jenoli, .....	Italian,.....	Miner, .....	40	M.	Sterrick Creek, ....	Lackawanna,...	Contusion of the back by fall of rock.
17	Patrick McDermott, ...	Irish,.....	Miner, .....	55	S.	Sterrick Creek, ....	Lackawanna,...	Rib fractured and scalp lacerated by blasting. He was running away from a blast and was struck by flying coal.
25	Raphael Lamarta, ....	Italian,.....	Miner, .....	44	M.	Gipsy Grove, .....	Lackawanna,...	Eye destroyed by blasting. He was tampering a hole and gave the needle a sudden jerk which exploded the charge.
June 11	Michael Brusk, .....	Polish,.....	Miner, .....	28	M.	Storrs, .....	Lackawanna,...	Arm fractured by blasting. His lamp set off a feeder which exploded the charge.
16	Michael Conway, .....	Irish,.....	Miner, .....	47	M.	Johnson, .....	Lackawanna,...	Seriously injured about the spine and leg by fall of rib coal while working out a blast.
19	John Turock, .....	Hungarian,...	Laborer, .....	30	M.	Dolph, .....	Lackawanna,...	Leg fractured in uncoupling cars. Outside. A trip of cars bumped from the rear.
29	Martin Cannon, .....	Irish,.....	Company man, ....	68	M.	Eddy Creek, .....	Lackawanna,...	Leg fractured by cars. The mule turned the wrong road and threw the car on him.
July 11	Thomas Thomas, .....	American,...	Company man, ....	19	S.	Storrs, .....	Lackawanna,...	Legs fractured by falling off a motor while it was passing over a frog. It was necessary to amputate both legs.
14	Toney Fury, .....	Italian,.....	Headman, .....	20	S.	Gipsy Grove, .....	Lackawanna,...	Foot crushed in moving a large spur wheel. Outside.

July	17	Andrew Sandrell,.....	Italian,.....	Laborer,.....	42	M.	Sterrick Creek, ....	Lackawanna,...	Leg fractured by fall of coal that the miner testified he had examined and considered safe.
	21	Bruno Vickerofski, ....	Polish,.....	Laborer,.....	21	S.	Johnson, .....	Lackawanna,...	Leg fractured while jumping out of an empty car. He was frightened by a small explosion of gas in the next chamber.
	26	Thomas Hall, .....	American,...	Driver, .....	17	S.	Storrs, .....	Lackawanna,...	Both legs fractured by the recoil of a plane rope.
Aug.	3	Joseph Pononia, .....	Italian,.....	Laborer,.....	52	S.	Sterrick Creek, ....	Lackawanna,...	Injured on the body by fall of roof while the and the miner were barring it down.
	22	Joseph Soloski, .....	Polish,.....	Driver, .....	20	S.	Ontario, .....	Lackawanna,...	Both legs fractured by falling under the
Sept.	23	Joseph Golden, .....	Irish,.....	Driver, .....	17	S.	Mt. Jessup, .....	Lackawanna,...	Three fingers severed by fall of roof.
	7	Elisd Lawrence, .....	Welsh,.....	Miner, .....	39	S.	Storrs, .....	Lackawanna,...	Leg fractured by fall of coal that contained a slip.
	7	Edward Hannaghgan, ..	Irish,.....	Miner, .....	46	M.	Storrs, .....	Lackawanna,...	Leg fractured by fall of bell roof.
	7	John Molter, .....	Slavonian,...	Miner, .....	48	M.	Ontario, .....	Lackawanna,...	Two ribs fractured by cars. The mule's harness caught in the car in passing and threw it on his leg.
	12	Charles Cezeski, .....	Polish,.....	Miner, .....	41	M.	Storrs, .....	Lackawanna,...	Three ribs fractured by fall of roof while standing a discharged prop.
Oct.	10	Anthony Frisk, .....	Russian,.....	Dumpman, .....	26	M.	Johnson, .....	Lackawanna,...	Leg and collar bone fractured while trying to cross the track ahead of a moving culm car. Outside.
	12	Joseph Stead, .....	Polish,.....	Slatepicker, .....	15	....	Mt. Jessup, .....	Lackawanna,...	Leg fractured while playing with a revolving shaft in the breaker.
	15	John Yoncovits, .....	Russian,.....	Laborer, .....	20	M.	Ontario, .....	Lackawanna,...	Leg fractured while coupling cars in motion on top of a plane. Inside.
Nov.	15	Oliver Jones, .....	Welsh,.....	Driver, .....	18	....	Storrs, .....	Lackawanna,...	Nose broken by a kick from a mule. He had taken hold of the mule's tail in passing.
	10	Jesse Nova, .....	Italian,.....	Miner, .....	32	S.	Gipsy Grove, ....	Lackawanna,...	Foot crushed by a fall of coal while barring it down.
Dec.	14	Jacob Yonerhet, .....	Polish,.....	Miner, .....	40	M.	Richmond No. 3, ..	Lackawanna,...	Injured on face and hands while retreating from a blast.
	27	John Davis, .....	American,...	Runner, .....	19	S.	Lackawanna, .....	Lackawanna,...	Arm and leg fractured by cars. He was riding the car and the car became derailed, and his arm was pinioned between the roof and car.

## IMPROVEMENTS

## SCRANTON COAL COMPANY

Johnson.—No improvements reported.

Ontario.—The portion of the breaker blown down by the tornado last fall, has been rebuilt and is expected to resume operations about March 12. The Raymond washery was torn down and moved to this colliery and is now being rebuilt. This will necessitate an increase in the power plant, and it is intended to add two boilers to the present plant for this purpose.

Richmond No. 3.—An additional 200 H. P. Maxim boiler has been added to the present plant. The new shaft has been named in honor of General Manager John R. Bryden, and is now known as Bryden Shaft.

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Storrs.—Seven hundred feet of the Clark Vein Slope at No. 3 shaft have been graded; average thickness 5 feet. This was done in order to enable them to run the cars to the bottom lift of the slope.

The floors of the boiler house have been concreted; also concrete fronts at their No. 3 shaft. Four new Emery Pickers were installed in the breaker. A scraper line was constructed to convey the culm from the breaker to the washery in order to do away with the handling of cars.

## DELAWARE AND HUDSON COMPANY

Eddy Creek.—Grassy Island No. 2 shaft sinking completed to the No. 4 Dunmore vein, a distance of 117 feet. The sinking of No. 4 shaft has been started and is down a distance of 50 feet. This shaft is to be used as a second opening to the No. 2 shaft.

One 78 inch locomotive boiler has been installed at the Grassy Island Washery, also a 10 inch x 14 inch engine and a 600 foot scraper line for feeding bank to washery.

Miles slope extended in rock from the Rock Vein towards the No. 4 Dunmore Vein, a distance of 750 feet. This slope is to be used as a second opening to the Eddy Creek.

A 28 foot Guibal fan has been installed at the Eddy Creek. The shaft has been widened from 10 feet x 24 feet to 12 feet x 33.4 feet from surface to the 14 foot vein.

## PENNSYLVANIA COAL COMPANY ✓

No. 1 Colliery.—In 1904 work was commenced on a new brick building 16x36 to contain three rooms; office for the outside foreman, shifting shanty for the fireman and a shifting shanty for the breaker men. This work has been completed.

No. 2 Shaft, Outside.—The following buildings have been erected during the year: a new concrete building 14 feet x 40 feet with three rooms; office for the inside foreman, shifting shanty for the fireman and a shanty for the miners. Two additional locomotive boilers have been installed and a new corrugated iron boiler house 40 feet x 60 feet has been built.

No. 2 Shaft, Inside—A new air bridge has been built in the second Dunmore vein, sectional area 120 square feet. A new engine plane 3,000 feet long has been built in the third Dunmore vein, and a new pair of hoisting engines 15 inches x 36 inches installed to operate the plane.

No. 1 Shaft Inside.—The water tunnel from the Lackawanna River to the No. 1 Shaft was completed August 30. The total length of the tunnel is 6,800 feet.

#### LACKAWANNA COAL COMPANY, LIMITED

Lackawanna.—At the new shaft on the Lillibridge tract gangways have been driven in the Dunmore vein 500 feet east and west, and a sump driven on the south dip a distance of 275 feet. No chambers have been turned within 200 feet of the shaft.

A 100 K. W. G. E. generator, direct connected to a 16 inch x 15 inch McEwen engine, has been installed at the breaker and carried overland 2,400 feet to the new shaft and down the same to the Dunmore vein, where it operates one seven ton locomotive with reel attachment for chamber work. This locomotive is handling transportation in the Dunmore vein. They have also two percussion drills in operation for drilling rock in this vein, which give good satisfaction. A conveyor line with 10 inches x 48 inches flights 258 foot centres, with an automatic feed and car tip, has been erected to convey the new shaft coal to the breaker. This conveyor is built on a five and a quarter inch pitch and is operated by a 12 inch x 18 inch single engine with rope drive.

The three 250 H. P. boilers and 8 inch steam line which were commenced last year have been completed.

On account of the increase in this plant, it became necessary to install a larger blast fan and to increase the area of the air duct accordingly, and also to install a 2,000 H. P. Cochrane water heater in place of the old one which was only 1,200 H. P. 12x12x7 duplex feed pump was installed to work in connection with the old one.

A 14 inch exhaust steam pipe 200 feet long was erected between the breaker and the new heater and all the exhaust of the pumps and engines, except the shaft hoist, are coupled to the same.

The four stacks on the Cahall boilers were lengthened 32 feet to give better draught for these boilers.

A conveyor was installed to carry fuel from the present fire room conveyor to the bins in front of the Maxim boilers.

The annex breaker engine foundation has been replaced by concrete foundations built of wood, and a substantial frame building has been erected over the same.

The cribbing under the breaker shaft tower was replaced to a depth of 80 feet. Concrete foundations were made outside of this cribbing on which new sills were placed to carry the tower. This tower was also reinforced to the car dump, from the ground.

Three single-decked shaking screens were installed on head of the breaker to handle the run of mine coal and are giving very good results.



## EXPLANATION

The following mines have not been working for some time and therefore are not included in this report:

Scranton Coal Company, Ontario Colliery.—Ontario tunnel, Sturges shaft, Klondike drift, Blue Ridge tunnel, Blue Ridge shaft.

Delaware and Hudson Company, Eddy Creek Colliery.—Miles slope, Eddy Creek shaft, Grassy Island shaft, Grassy Island drift.

Lackawanna Coal Company, Limited, Lackawanna Colliery.—Lackawanna No. 4 shaft.

The following persons were granted certificates of qualification during the year:

## Mine Foremen

John B. T. Jones, Charles R. Travis, John Titly, John J. Francis, William H. Evans, William Boston, John L. Williams, Charles H. Courtright, John Davison, Thomas Beer, James J. Kelley, Charles J. Arnold, Thomas Laird, Frank McCarthy, Evan B. Williams, John Elderkin, George Evans, Thomas J. Gwynne, Eli Bailey, David Merris, Albert Roskelly, Philip W. Foster, William Sullivan, William S. Davis, James B. Loftus, Samuel J. Lewis, William F. Hawkins.

## Assistant Mine Foremen

Patrick Fitzsimmons, Robert Fidiam, Richard Duggan, John R. Orgill, Lloyd Parry, Edward W. Lewis, Thomas D. Lewis, Thomas M. Owens, George E. Richardson, Charles H. Jenkins, Howell R. Morgan, Patrick McClearn, John J. Connolly, Joseph J. Holback, John Steed, Arthur L. Davis, Thomas W. Price, Patrick Hession, Seth Smith, John Evans, Thomas N. Evans, Henry Dierks, Llewellyn J. Evans, Samuel Rouse, James Margetson, William Sharples, Martin Nealon, Thomas J. Williams, Joseph B. Williams, John Munro, William H. Rolls, Thomas H. Couzens, William Morgan, Michael Munley.



## Third District

LACKAWANNA COUNTY

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Scranton, Pa., February 23, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Dear Sir: I have the honor of transmitting herewith my report as Inspector of Mines for the Third Anthracite District for the year ending December 31, 1906, as provided in the Act of April 14, 1903.

Respectfully submitted,

H. O. PRYTHERCH,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	20
Number of mines, .....	28
Number of mines in operation, .....	28
Number of tons of coal shipped to market, .....	3,784,221
Number of tons used at mines for steam and heat, ....	430,055
Number of tons sold to local trade and used by employes,	136,450
Number of tons produced, .....	4,350,726
Number of persons employed inside of mines, .....	7,809
Number of persons employed outside, .....	2,323
Number of fatal accidents inside of mines, .....	30
Number of fatal accidents outside, .....	2
Number of non-fatal accidents inside of mines, .....	54
Number of non-fatal accidents outside, .....	10
Number of tons of coal produced per fatal accident in- side, .....	145,024
Number of persons employed per fatal accident inside, ..	260
Number of persons employed per fatal accident outside,	1,161
Number of persons employed per non-fatal accident in- side, .....	145
Number of persons employed per non-fatal accident out- side, .....	232
Number of wives made widows, .....	19
Number of children orphaned, .....	41
Number of steam locomotives used outside, .....	7
Number of compressed air locomotives used inside, ....	22
Number of electric motors used inside, .....	21
Number of fans in use, .....	26
Number of gaseous mines in operation, .....	19
Number of non-gaseous mines in operation, .....	9
Number of old mines abandoned, .....	1

TABLE A  
PRODUCTION OF COAL

Names of Operators	Tons
Delaware, Lackawanna and Western Railroad Company,	1,342,928
Delaware and Hudson Company, .....	1,161,068
Scranton Coal Company, .....	662,633
Price-Pancoast Coal Company, .....	602,163
Pennsylvania Coal Company, .....	156,402
Green Ridge Coal Company, .....	129,270
North End Coal Company, .....	90,671
Economy, Light, Heat and Power Company, .....	64,224
Carney and Brown, .....	46,781
Nay Aug Coal Company, .....	33,831
A. D. and F. M. Spencer, .....	32,005
Bull's Head Coal Company, .....	14,247
J. J. Gibbons, .....	10,900
Mountain Lake Coal Company, .....	3,603
Total, .....	4,350,726

Production by Counties

Lackawanna, .....	4,350,726
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
D., L. and W. R. R. Co., .....	12	1	13	17	2	19	111,911	78,996	2,276	606	2,832	185	606	131	3.3
Delaware and Hudson Co., .....	4	1	5	14	5	19	290,267	82,933	1,215	599	2,834	559	599	160	120
Scranton Coal Co., .....	2	.....	2	10	.....	10	331,316	66,263	1,245	414	1,069	622	599	122	.....
Price-Pancast Coal Co., .....	6	.....	6	2	1	3	129,433	301,081	1,009	262	1,331	214	.....	534	262
Pennsylvania Coal Co., .....	3	.....	3	3	1	4	78,201	52,134	604	84	388	152	.....	101	84
Green Ridge Coal Co., .....	3	.....	3	7	.....	7	43,090	18,467	259	96	364	90	.....	58	.....
North End Coal Co., .....	2	.....	2	1	.....	1	45,335	32,005	253	73	326	126	.....	74	47
A. D. .....	.....	.....	.....	.....	.....	.....	.....	.....	47	121	.....	.....	.....	.....	.....
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	.....	154	113	267	.....	.....	.....	.....
Totals and averages for district, .....	30	2	32	54	10	64	145,724	80,569	7,846	2,323	10,132	260	1,161	145	232

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of roof, .....	1	1	2	1	1	2	2	.....	.....	2	.....	1	13	23.33
Mine cars, .....	1	.....	1	.....	.....	1	.....	.....	.....	1	1	.....	5	16.67
Premature blasts, .....	.....	.....	2	.....	2	.....	.....	2	.....	.....	3	.....	10	23.33
Falling into shafts, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	6.67
Totals, .....	2	1	6	1	3	3	2	2	.....	4	5	1	30	100.00
Causes of Accidents Outside														
Cars, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	50.00
Machinery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	50.00
Totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	100.00
Grand totals inside and outside, .....	2	1	6	1	3	3	2	2	.....	5	5	2	32	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of roof, .....	3				1	1	3	5			1	1	15	27.78
Mine cars, .....	3	1	3		1	2		1			2	1	15	27.78
Explosions of gas and dust, .....	3						3			2			7	12.97
Explosions of powder and dynamite, .....	1												1	1.85
Premature blasts, .....	1	1	2		1		1			1	1		8	14.81
By mules, .....						1	1						2	3.70
Miscellaneous, .....			1		2	1		1			1		6	11.11
Totals, .....	10	2	6		5	5	9	7		3	5	2	54	100.00
Causes of Accidents Outside														
Cars, .....	1	2	2		1					1			7	70.00
Machinery, .....							1						1	10.00
Miscellaneous, .....			1			1							2	20.00
Totals, .....	1	2	3		1	1	1			1			10	100.00
Grand totals inside and outside, .....	11	4	9		6	6	10	7		4	5	2	64	



TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....			3	1	2	1	1	2	...	1	2	1	14
Miners' laborers, .....	1	1	2	...	1	1	1	...	...	2	1	...	10
Drivers and runners, .....			1	...	...	...	...	...	...	1	...	...	2
Doorboys and helpers, .....						1							1
Company men, .....	1										2		3
Totals, .....	2	1	6	1	3	3	2	2	...	4	3	1	30
Outside													
Slate pickers (boys), .....										1			1
All other employees, .....												1	1
Totals, .....										1		1	2
Grand totals inside and outside, ...	2	1	6	1	3	3	2	2	...	5	3	2	32

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	4	.....	2	.....	1	1	2	4	.....	3	2	.....	19
Miners' laborers, .....	2	.....	1	.....	2	3	4	1	.....	3	1	.....	9
Drivers and runners, .....	.....	1	2	.....	2	2	2	.....	.....	.....	1	.....	14
Doorboys and helpers, .....	.....	.....	1	.....	1	1	.....	.....	.....	.....	.....	.....	2
Company men, .....	2	.....	.....	.....	1	.....	.....	2	.....	.....	.....	1	6
All other employees, .....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	2	.....	4
Totals, .....	10	2	6	.....	5	5	9	7	.....	3	5	2	54
Outside													
Foremen, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Slate pickers (boys), .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
All other employees, .....	1	2	3	.....	1	1	.....	.....	.....	.....	.....	.....	8
Totals, .....	1	2	3	.....	1	1	1	.....	.....	1	.....	.....	10
Grand totals inside and outside, ....	11	4	9	.....	6	6	10	7	.....	4	5	2	64

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1		1							1	3		6
English, .....								1					1
Irish, .....									1	1			2
German, .....	1		2			2	1	1		1		1	9
Polish, .....					1					1	1		3
Hungarian, .....			1									1	2
Italian, .....		1			1		1						3
Slavonian, .....			1	1		1	1			1			5
Lithuanian, .....					1								1
Austrian, .....			1										1
Russian, .....													1
Totals, .....	2	1	6	1	2	2	2	2		5	5	2	32

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	3	6		2	2	2			1	1	1	20
English, .....	1				1	1	1			1			6
Welsh, .....					2	1		1			1		6
Scotch, .....						1					1		2
Irish, .....			1				2	2			1		6
German, .....		1	1				1						3
Polish, .....	1					1	2					1	9
Italian, .....							1	1					2
Slavonian, .....	1				1								2
Lithuanian, .....	3		1							2			6
Austrian, .....											1		1
Russian, .....	1												1
Bohemian, .....						1							1
Totals, .....	11	4	9		6	6	10	7		4	5	2	64

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
D., L. and W. R. R. Co.	Shaft,....	Gaseous,....	Fan,....	14	4	4	80	.6	Open running,....	Steam,....	.....	7	242,999	124,934	232,301	249	502
	Drift,....	Non-gas,....	Fan,....	14	4	4	95	.8					63,800	24,860	70,700	132	508
	Diamond,....	Gaseous,....	Fan,....	16	6	6.5	104	1					82,560	56,800	139,360	2,835	500
	Tripp,....	Gaseous,....	Fan,....	14	4	4	104	1					124,065	130,070	174,095	492	500
	Tripp,....	Gaseous,....	Fan,....	14	4	4	116	.8					162,290	152,529	180,080	334	457
	Brisbin,....	Gaseous,....	Fan,....	12	3.5	4	133	.9					105,400	89,500	135,700	214	418
	Cayuga,....	Gaseous,....	Fan,....	20	6	5.6	65	1.4					281,700	232,000	321,800	530	458
	Manville,....	Gaseous,....	Fans,....	20	6	5.6	78	1.5					159,440	149,420	175,790	429	348
Delaware and Hudson Co.	Shaft,....	Gaseous,....	Fan,....	22	5	5	65	1.2	Guibal,....	Steam,....	.....	9	325,080	328,871	398,080	426	772
	Slope,....	Gaseous,....	Fan,....	20	5	5	80	1.2					192,370	122,430	178,030	294	416
	Marvine,....	Gaseous,....	Fan,....	20	5	6	75	1.5					162,290	152,529	180,080	334	457
	Leggitts Creek No. 1,....	Gaseous,....	Fan,....	20	5	6	75	2.5					105,400	89,500	135,700	214	418
	Leggitts Creek No. 2,....	Gaseous,....	Fan,....	20	5	6	90	2.6					281,700	232,000	321,800	530	458
	Leggitts Creek No. 3,....	Gaseous,....	Fans,....	20	6	5	75	1.4					159,440	149,420	175,790	429	348
	Dickson,....	Gaseous,....	Fans,....	20	6	5	83	2.3					159,440	149,420	175,790	429	348
	Slope,....	Gaseous,....	Fan,....	22	5	5	83	2.3					159,440	149,420	175,790	429	348
Scranton Coal Co.	Slope,....	Gaseous,....	Fan,....	20	5	5	66	1.3	Guibal,....	Steam,....	.....	4	50,000	54,800	79,000	111	494
	West Ridge,....	Gaseous,....	Fans,....	17	6	4	102	1.2					216,550	135,400	239,650	481	406
	Pine Brook,....	Gaseous,....	Fan,....	20	5	5	60	.7					128,900	118,400	140,100	125	947
	Mount Pleasant (main),....	Gaseous,....	Fan,....	12	3	3	114	.9					59,490	53,250	62,950	136	391
	Mount Pleasant (surface),....	Non-gas,....	Fan,....	12	3	3	114	.9					59,490	53,250	62,950	136	391

[illegible]

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
D., L., and W. R. R. Co. Diamond, Brisbin, Cayuga, Manville, Diamond washery,	Lackawanna,	R. A. Phillips,	Scranton,	Walter Reese,	Scranton,	D., L. and W.
Delaware and Hudson Co. Marvine, Leggitts Creek, Dickson, Von Storch, Leggitts Creek washery, Von Storch washery,	Lackawanna,	R. A. Phillips,	Scranton,	Fred. C. Smith,	Scranton,	D., L. and W.
Scranton Coal Co. West Ridge, Pine Brook, Mount Pleasant, Mount Pleasant washery,	Lackawanna,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorrancceton,	D. and H.
Prive-Pancoast Coal Co. Pancoast, Pancoast washery, Pennsylvania Coal Co. No. 5 shaft, Green Ridge Coal Co. Green Ridge, North End Coal Co. North End, Economy Light, Heat and Power Co. Economy washery, Carney and Brown Carney and Brown,	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna,	J. R. Bryden, J. R. Bryden, W. W. Ingls, W. L. Connell, W. L. Connell, E. M. Stack, John Carney,	Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Dunmore,	W. L. Allen, J. V. Birdley, J. W. Reed, W. L. Connell, Adam Guhwinder, Thomas Mullen,	Peckville, Throop, Dunmore, Scranton, Scranton, Scranton, Dunmore,	N. Y., O. and W. D., L. and W., N. Y., O. and W. Erie Erie N. Y., O. and W. D., L. and W. D., L. and W.



[illegible]





TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
D., L. and W. R. R. Co., .....	Lackawanna.	1,258,392	75,938	28,598	1,342,928	2,832	13	19	54,125	45,854	263
Delaware and Hudson Co., .....		990,940	154,570	15,558	1,161,068	2,834	5	19	49,133	46,926	238
Scranton Coal Co., .....		595,046	53,790	13,867	662,633	1,669	3	10	27,925	32,250	174
Price-Panocoast Coal Co., .....		543,714	54,750	3,659	602,163	1,331	5	3	27,700	29,850	120
Pennsylvania Coal Co., .....		139,659	1,606	15,137	156,402	1,388	2	4	9,170	4,318	64
Green Ridge Coal Co., .....		93,064	10,036	26,117	129,270	364	3	7	5,765	5,000	44
North Ridge Coal Co., .....		76,147	9,135	5,399	90,671	326	2	.....	3,200	2,800	21
Miscellaneous companies, .....		167,209	70,207	28,075	265,591	388	.....	2	2,873	2,350	73
Totals, .....		3,734,221	430,635	136,450	4,350,726	10,132	* 32	64	179,891	169,348	997

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
D., L. and W. R. K. Co., .....	Lackawanna,	18	396	20	5,110	5,406	5	10	63	5,167	17	10,339	6,224	3	.....
Delaware and Hudson Co., .....		22	6,120	16	4,091	10,130	.....	22	187	13,124	11	16,286	8,700	2	.....
Seranton Coal Co., .....		12	180	17	2,215	2,395	2	.....	20	2,822	14	8,680	7,725	2	.....
Price-Panama Coal Co., .....		.....	.....	11	1,835	1,835	.....	.....	31	1,858	5	1,200	1,000	2	.....
Pennsylvania Coal Co., .....		.....	.....	.....	450	450	.....	.....	17	1,452	2	784	252	.....	.....
Green Ridge Coal Co., .....		.....	.....	.....	375	375	.....	.....	13	1,432	1	450	300	1	.....
North End Coal Co., .....		.....	.....	.....	275	275	.....	.....	13	1,225	1	500	.....	.....	.....
Economy Light, Heat and Power Co., .....		.....	.....	.....	400	400	.....	.....	3	100	.....	.....	.....	.....	.....
Carney and Brown, .....		.....	.....	.....	300	300	.....	.....	4	115	.....	.....	.....	.....	.....
Nay Aug Coal Co., .....		.....	.....	.....	250	250	.....	.....	8	218	.....	.....	.....	.....	.....
A. D. and F. M. Spencer, .....		.....	.....	.....	225	225	.....	.....	6	280	.....	.....	.....	.....	.....
Bull's Head Coal Co., .....		6	180	.....	300	480	.....	.....	8	137	.....	.....	.....	.....	.....
J. J. Gibbons, .....		3	72	.....	.....	52	52	.....	6	80	.....	.....	.....	.....	.....
Mountain Lake Coal Co., .....		.....	.....	1	50	50	.....	.....	2	.....	.....	.....	.....	.....	.....
Totals, .....		121	6,818	87	15,712	22,560	7	22	372	26,010	53	38,239	24,261	12	13



TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside	
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employees	Total outside		
D. L. and W. R. R. Co.	Lackawanna.	3	...	6	220	244	81	9	4	35	61	603	...	1	9	15	56	16	2	96	195	838	
		2	...	4	185	255	64	15	4	16	92	617	...	1	8	9	42	3	2	54	119	736	
		1	...	5	187	189	73	17	2	76	...	581	...	1	8	12	56	...	4	55	136	687	
		1	...	5	138	134	51	13	2	41	...	388	...	1	5	14	24	21	2	36	103	491	
Diamond washery.	Lackawanna.	7	1	20	720	802	272	54	12	168	153	2,219	...	4	30	50	178	40	10	241	553	2,772	
		1	...	...	1	...	...	...	1	...	4	7	...	1	2	5	1	...	2	41	53	60	
Totals.		8	1	20	731	802	272	54	13	168	157	2,226	...	1	5	55	179	40	12	282	666	2,892	
Delaware and Hudson Co.	Lackawanna.	3	...	7	186	180	111	14	4	108	9	621	...	2	8	23	20	18	2	63	136	757	
		3	...	7	215	215	70	13	7	74	12	615	...	1	2	36	34	34	3	76	182	797	
		1	...	2	5	143	130	70	18	2	76	4	451	...	1	5	13	15	6	4	45	87	538
		1	...	1	5	180	170	82	13	2	78	16	548	...	1	13	21	16	27	2	56	136	684
Washeries: Leggett's Creek, Von Storch.	Lackawanna.	6	3	24	724	695	333	58	15	336	41	2,235	...	1	6	32	93	75	85	9	240	541	2,776
		...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	...	...	16	20	20	
		...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	4	4	...	28	38	38	
Totals.		6	3	24	724	695	333	58	15	336	41	2,235	...	2	...	2	6	4	...	44	58	58	
		6	3	24	724	695	333	58	15	336	41	2,235	...	1	8	95	81	89	9	284	599	2,834	

[illegible]

TABLE 3.—Recapitulation

Names of Operators	County	Inside										Outside										Grand total inside and outside	
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorbys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside		
D., L. and W. R. R. Co., ..	Lackawanna.	8	1	20	751	892	272	54	13	168	157	2,296	1	9	32	55	179	40	12	282	606	2,832	
Delaware and Hudson Co., ..		6	3	24	724	695	333	58	15	336	141	2,235	1	8	32	85	81	89	5	281	539	2,834	
Seranton Coal Co., ..		4	1	11	401	364	293	35	15	....	143	1,225	4	4	22	35	118	82	5	174	444	1,669	
Price-Pancoast Coal Co., ..		3	2	7	326	316	150	60	6	23	13	1,069	1	2	14	19	66	51	4	165	262	1,381	
Pennsylvania Coal Co., ..		1	1	1	149	119	50	8	1	12	14	304	...	1	1	6	5	13	19	2	62	84	388
Green Ridge Coal Co., ..		3	1	2	89	88	51	3	3	12	14	269	1	1	6	12	8	2	2	3	62	95	364
North End Coal Co., ..		1	1	3	67	92	35	4	2	24	2	253	1	1	5	17	22	1	1	3	73	326	
Miscellaneous companies, ..		5	1	....	77	71	41	2	2	24	2	228	4	1	10	16	47	12	7	57	160	388	
Totals, .....			29	16	68	2,527	2,571	1,161	225	55	578	584	7,809	12	29	125	214	534	296	45	1,038	2,323	10,132

TABLE 3. —PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
D. L. and W. R. R. Co. Diamond, ..... Brisbin, ..... Cayuga, ..... Manville, .....	Lackawanna, {	18 17 17 22	19 21 18 22	23 23 21 21	..... ..... 10 .....	15 11 18 10	23 22 20 23	21 20 18 23	22 21 22 21	19 18 17 17	20 16 18 21	21 21 20 22	20 21 19 22	221 241 238 230
Delaware and Hudson Co. Marvine, ..... Leggitts Creek, ..... Dickson, ..... Von Storch, .....	Lackawanna, {	24 21 20 22	18 13 15 19	25 23 19 22	..... ..... ..... .....	13 10 16 11	25 24 25 19	22 17 23 19	21 18 18 11	17 14 15 16	18 17 17 16	18 20 18 19	20 18 20 18	221 192 206 192
Scranton Coal Co. West Ridge, ..... Pine Brook, ..... Mount Pleasant, .....	Lackawanna, {	11 14 12	12 11 10	11 17 13	..... ..... .....	5 2 8	8 18 14	8 18 14	9 16 15	9 13 11	10 15 11	10 16 10	11 17 14	104 157 132
Price-Pancoast Coal Co. Pancoast, .....	Lackawanna, ...	23	22	24	.....	12	21	22	22	22	22	22	21	233
Pennsylvania Coal Co. No. 5 shaft, .....	Lackawanna, ...	17	13	18	7	8	18	16	12	15	19	17	17	177
Green Ridge Coal Co. Green Ridge, .....	Lackawanna, ...	22	18	21	.....	12	18	18	20	18	21	21	20	209
North End Coal Co. North End, .....	Lackawanna, ...	19	16	16	.....	8	19	19	19	17	18	22	20	183
Carney and Brown Carney and Brown, .....	Lackawanna, ...	31	28	30	28	19	.....	.....	.....	26	26	30	31	247
Nay Aug. Coal Co. Nay Aug., .....	Lackawanna, ...	5	6	4	.....	2	4	3	3	3	4	4	2	40





TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	9 Alex. Rutkowski, .....	Polish, .....	Laborer, ..	25	S.	.....	.....	Pancoat, .....	Lackawanna.	Fatally injured by falling roof rock. Died January 10.
29	Thomas J. Griffiths, ....	American, ..	Company man, ..	30	M.	1	2	Tripp slope, ..		Instantly killed by falling under moving mine cars.
Feb.	5 John Honadel, .....	Slavonian, ..	Laborer, ..	32	S.	.....	.....	Pancoat, .....		Killed by fall of roof in chamber in Clark vein.
March	8 George Yourcavidge, ..	Polish, .....	Driver, ....	24	S.	.....	.....	West Ridge, ..		Squeezed between car and rib. Died March 23.
10	Michael Bobback, .....	Russian, .....	Miner, ....	28	M.	1	2	Green Ridge, ..		Killed by fall of roof at face of chamber in No. 4 vein.
14	Caroline Gindies, .....	Italian, .....	Laborer, ..	28	M.	1	2	No. 5 shaft, ..		Killed by a blast.
17	Charles Douker, .....	Lithuanian, ..	Miner, ....	31	S.	.....	.....	Brisbin, .....		Fatally injured by falling roof rock. Died in hospital.
17	Taliesin Williams, .....	American, .....	Miner, ....	40	M.	1	1	Van Storch, ..		Killed by a blast in the "Four Foot" vein.
22	John Rock, .....	Polish, .....	Laborer, ..	19	S.	.....	.....	Dickson, .....		Killed by flying coal from a blast.
April	28 Frank Jason, .....	Lithuanian, ..	Miner, ....	42	M.	1	.....	No. 5 shaft, ..		Instantly killed by falling roof rock in Bradley's tunnel.
May	16 Pregze Vivdunnat, .....	Hungarian, ..	Miner, ....	45	M.	1	4	Pancoat, .....		Instantly killed by a premature blast in No. 8 vein.
25	George Sininski, .....	Austrian, .....	Laborer, ..	28	M.	1	1	Brisbin, .....		Killed by fall of rock at face of a chamber in Clark vein.
29	John Sepisce, .....	Slavonian, ..	Miner, ....	41	M.	1	3	Green Ridge slope, ..		Instantly killed by a premature blast.
June	4 Michael Klezowski, ....	Polish, .....	Laborer, ..	47	M.	1	1	Cayuga, .....		Killed by fall of roof rock in Diamond vein.
5	Frank Bugno, .....	Polish, .....	Doorman, ..	57	M.	1	2	Green Ridge slope, ..		Killed by a trip of mine cars.
19	Anthony Kuskon, .....	Lithuanian, ..	Miner, ....	24	M.	1	.....	Manville, .....		Killed by fall of roof at face of chamber.
12	Joseph Pink, .....	Lithuanian, ..	Miner, ....	35	M.	1	1	Cayuga, .....		Killed by fall of roof following a blast in Rock vein.
17	Andrew Metelavitch, ..	Polish, .....	Laborer, ..	40	M.	1	4	Diamond, .....		Killed by fall of roof at face of gangway.
Aug.	3 Jeremiah Walton, .....	English, .....	Miner, ....	50	S.	.....	.....	North End, ..		Instantly killed by a blast of dynamite fired in a rock tunnel.
3	Charles Parrish, .....	Polish, .....	Miner, ....	27	M.	1	2	.....		Fatally injured by mine cars. Died October 30.
Oct.	1 Edward McNamara, .....	American, ..	Driver, ....	17	S.	.....	.....	Cayuga, .....		
9	Fred Grana, .....	German, .....	Laborer, ..	20	M.	1	2	West Ridge, ..		Instantly killed by falling roof rock.

TABLE 4.—Continued

Date of Accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Oct.	11 James Jordan, .....	Irish, .....	Slate picker, .....	14	S.	.....	.....	Brisbin breaker.	Lackawanna,	Fatally injured in breaker machinery. Died same day. Outside.
12 Gabor Fuckle, .....	Hungarian, .....	Laborer, .....	26	S.	.....	.....	.....	Pancoast, .....		Killed by falling ore ascending cage.
23 John Korriss, .....	Lithuanian, .....	Miner, .....	33	S.	.....	.....	.....	Cayuga, .....		Killed by falling rock while knocking out a prop.
Nov.	6 William Ollenduke, .....	American, .....	Company man, .....	38	M.	1	3	Marvine, .....		Killed by cars inside.
7 Gusti Kuba, .....	Hungarian, .....	Miner, .....	23	M.	1	3	.....	Pancoast, .....		Killed by flying coal from his own blast.
14 Thomas Rodway, .....	American, .....	Company man, .....	23	S.	.....	.....	.....	Brisbin, .....		Fell into main shaft at surface vein foot.
26 Steve Sopt, .....	Polish, .....	Laborer, .....	40	S.	.....	.....	.....	Tripp slope, .....		Killed by a blast he fired in the absence of his miner.
21 Owen Grogan, .....	American, .....	Miner, .....	40	M.	1	5	.....	Tripp shaft, .....		Killed by a premature blast.
21 Frank Sana, .....	Italian, .....	Company man, .....	41	M.	1	3	.....	Von Storch washery.		Squeezed between railroad cars and platform. Outside.
28 Paul Kisavitch, .....	Polish, .....	Miner, .....	22	S.	.....	.....	.....	Von Storch slope.		Killed by fall of roof at face of Four Foot vein.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	David J. Roberts, .....	Welsh, .....	Company man, .....	22	S.	Leggitts Creek, ..	Lackawanna,	Leg fractured by fall of roof.
5	John Erozonis, .....	Lithuanian, .....	Laborer, .....	45	M.	West Ridge, .....		Spine and arm injured.
6	John Pittiavitz, .....	Russian, .....	Miner, .....	28	S.	Marvine, .....		Hands and face burned by powder.
13	Mike Barnick, .....	Slavonian, .....	Miner, .....	41	M.	Green Ridge, .....		Injured by flying coal from blast.
17	Thomas Buddle, .....	English, .....	Miner, .....	33	M.	Pine Brook, .....		Foot crushed by falling roof rock.
18	James Wilshire, .....	English, .....	Miner, .....	41	M.	Pine Brook, .....		Burned on hands and face by explosion of gas.
18	Joe Pongonis, .....	Lithuanian, .....	Laborer, .....	28	S.	Pine Brook, .....		Leg fractured by falling in front of mine car.
20	Joe Listanski, .....	Lithuanian, .....	Driver, .....	17	S.	Brislin, .....		Leg fractured by cars.
24	James Watson, .....	American, .....	Company man, .....	25	M.	Manville, .....		Two ribs fractured by cars. Outside.
27	Joseph Martin, .....	American, .....	Driver, .....	16	S.	Leggitts Creek, ..		Leg fractured by cars.
30	Stanley Gozinski, .....	Polish, .....	Driver, .....	17	S.	Pancast, .....		Leg fractured by falling in front of cars.
Feb.	William Mulhern, .....	American, .....	Headman, .....	27	S.	Diamond, .....		Outside.
5	Dan Walsh, .....	German, .....	Laborer, .....	45	S.	Pancast, .....		Arm cut off by cars. Outside.
12	James Houghton, .....	American, .....	Driver, .....	18	S.	Manville, .....		Head and jaw injured by flying coal from blast.
March	Thomas Lloyd, .....	American, .....	Engineer, .....	21	S.	Leggitts Creek, ..		Injured between cars and air motor.
5	Joe Comstock, .....	American, .....	Dicking boss, .....	60	M.	Stencer, .....		Nose fractured by cars. Outside.
6	Austin Malla, .....	American, .....	Miner, boy, .....	40	M.	Von Storch, .....		Eye blown out by a blast.
10	Arthur Huches, .....	American, .....	Office boy, .....	16	S.	Von Storch, .....		Leg fractured by cars. Outside.
13	Michael Kolala, .....	German, .....	Miner, .....	45	M.	Brislin, .....		Leg fractured by flying coal.
13	Emlyn Parker, .....	American, .....	Runner, .....	18	S.	Marvine, .....		Leg fractured by mine cars.
14	John Fadden, .....	Irish, .....	Driver, .....	17	S.	Diamond, .....		Arm fractured by mine cars.
21	Elijah Swingle, .....	American, .....	Brakeman, .....	62	M.	No. 5 shaft, .....		Seriously injured by railroad cars. Outside.
23	Joseph Bennett, .....	Lithuanian, .....	Laborer, .....	35	M.	Cayuga, .....		Leg cut by an axe.
27	Jes. Sweeney, .....	American, .....	Door boy, .....	16	S.	Leggitts Creek, ..		Leg fractured by cars.
May	William Evans, .....	Welsh, .....	Driver, .....	16	S.	Cayuga, .....		Face injured by coming in contact with a mule.
12	Reese D. John, .....	American, .....	Driver, .....	17	S.	Marvine, .....		Leg fractured by haulage rope.
13	Michael Barnick, .....	Slavonian, .....	Miner, .....	41	M.	Green Ridge, .....		Injured by flying coal from blast.
14	Sidney Miller, .....	English, .....	Company man, .....	30	M.	West Ridge, .....		Leg fractured by a fall of roof rock.
29	Joe Grier, .....	Welsh, .....	Driver boss, .....	22	S.	Green Ridge, .....		Squeezed between car and rib.
29	Michael Hennihan, .....	American, .....	Driver, .....	16	S.	Leggitts Creek, ..		Index finger cut off by cars. Outside.
June	Charles May, .....	American, .....	Driver, .....	16	S.	Green Ridge, .....		Leg fractured by haulage rope.
6	Simon Urbanic, .....	Polish, .....	Driver, .....	46	M.	Brislin, .....		Leg injured between two mine cars.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
June	7 David Mathews, .....	American, .....	Company man, .....	15	S.	Leggitts Creek, ...		Side injured by falling on chute in breaker. Outside.
	20 Joseph Nowalk, .....	Bohemian, .....	Doorman, .....	61	S.	Brislin, .....		Squeezed against a mine door.
July	23 William H. Brown, .....	English, .....	Miner, .....	35	M.	West Ridge, ....		Back injured by falling roof work.
	24 Rees Thomas, .....	Welsh, .....	Runner, .....	20	S.	Brislin, .....		Foot injured by cars.
	25 Thomas Donohoe, .....	Irish, .....	Driver, .....	18	S.	No. 5 shaft, ....		Injured in breaker machinery. Outside.
	5 Albert Kassa, .....	Italian, .....	Slate picker, .....	14	S.	Diamond, .....		Injured in face burned by an explosion of gas.
	9 John Adams, .....	Polish, .....	Laborer, .....	30	S.	Marvine, .....		Hands and face burned by an explosion of gas.
	9 Anthony Belaskie, .....	Polish, .....	Laborer, .....	30	S.	Marvine, .....		Hands and face burned by an explosion of gas.
	9 Stanley Noraskas, .....	Polish, .....	Laborer, .....	30	S.	Marvine, .....		Hands and face burned by an explosion of gas.
	16 William Parker, .....	American, .....	Track layer, .....	30	M.	West Ridge, ....		Fractured by falling roof rock.
	17 William Wainman, .....	English, .....	Miner, .....	57	M.	Diamond, .....		Injured by a bell-shaped piece of roof rock that fell without giving any warning.
	17 Michael Kelly, .....	American, .....	Laborer, .....	32	M.	Diamond, .....		Injured by a bell-shaped piece of roof rock that fell without giving any warning.
							Lockawanna,	
	19 James Napaney, .....	Irish, .....	Miner, .....	35	M.	West Ridge, ....		Back injured by flying coal.
Aug.	24 Jacob Pfeiffer, .....	German, .....	Driver, .....	17	S.	Pine Brook, ....		Skull fractured by a kick from a mule.
	3 Frank Kankala, .....	Polish, .....	Miner, .....	26	M.	Cayuga, .....		Injured by drill while pulling roof rock.
	6 Joseph Simon, .....	Italian, .....	Laborer, .....	23	S.	No. 5 shaft, ....		Leg injured by falling rock.
	22 Michael Foley, .....	Irish, .....	Company man, .....	22	S.	Green Ridge, ....		Leg fractured by cars.
	15 Joseph Doolittle, .....	Polish, .....	Miner, .....	26	S.	Cayuga, .....		Head lacerated and hip dislocated by falling roof.
	16 Martin Quinn, .....	Irish, .....	Miner, .....	42	S.	Green Ridge, ....		Squeezed around hips by falling roof rock.
	28 Sam Rasmick, .....	Welsh, .....	Miner, .....	45	S.	No. 5 shaft, ....		Slightly injured by fall of rock.
	30 Minnie, .....	Polish, .....	Company man, .....	31	S.	Tripp slope, ....		Leg fractured by haulage rope.
	16 Edward Ward, .....	English, .....	Miner, .....	40	M.	Mount Pleasant, ..		Leg fractured by flying coal from his own blast.
Oct.	17 Joseph Cavage, .....	Lithuanian, .....	Miner, .....	38	M.	Marvine, .....		Hands and face burned by an explosion of gas.
	17 Joseph Kaudis, .....	Lithuanian, .....	Miner, .....	35	S.	Marvine, .....		Side.
	24 David S. Sward, .....	American, .....	Foreman, .....	55	M.	Von Storch, ....		Seriously injured by railroad cars. Outside.

Nov.	10	Edward McGuire, .....	Scotch, .....	Footman, .....	27	S.	Leggitts Creek, ...	Leg broken by mine cars.
	14	Peter O'Hara, .....	Irish, .....	Runner, .....	24	S.	Stencer, .....	Fell under moving mine car.
	15	Floyd Sillick, .....	American, .....	Engineer, .....	29	S.	Leggitts Creek, ...	Three toes cut off by pump.
	21	Edward Owens, .....	Welsh, .....	Miner, .....	36	M.	Tripp shaft, .....	Injured by a blast.
	30	Joseph Barnick, .....	Austrian, .....	Miner, .....	33	M.	Pancoast, .....	Severely injured by fall of roof.
Dec.	1	Friend Green, .....	American, .....	Company man, .....	33	M.	Diamond, .....	Injured by cars.
	24	Robert Cutles, .....	Polish, .....	Laborer, .....	23	S.	Pine Brook, .....	Seriously injured by fall of roof.

Lackawanna...



## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

January 9, Alexander Rutkowski, Polish, laborer, was fatally injured by a fall of roof at Pancoast shaft. Died January 10.

February 5, John Honadel, Slavonian, laborer, was instantly killed by falling roof rock, in a chamber in the Clark vein.

March 10, Michael Bobback, Russian, miner, was killed by a fall of rock at the face of his chamber in No. 4 vein, Green Ridge slope.

March 17, Charles Bouker, Lithuanian, miner, was fatally injured by a fall of roof at Brisbin, and died same day in the Moses Taylor Hospital.

April 26, Frank Jason, Lithuanian, miner, was instantly killed by a fall of roof at No. 5 shaft, Pennsylvania Coal Company.

May 25, George Sininski, Austrian, laborer, was instantly killed by a fall of a bell-shaped piece of roof rock, at the face of chamber, Brisbin mine.

June 4, Michael Kierzyuski, Polish, laborer, was instantly killed by a fall of roof at Cayuga, while assisting the miner in an adjoining chamber.

June 19, Anthony Kaskon, Lithuanian, miner, was killed by a fall in the Manville mine, while in the act of restanding discharged props.

July 12, Joseph Pink, Lithuanian, miner, was instantly killed by a fall of roof at face of chamber in the Cayuga mine, the result of not examining the roof after a blast.

July 17, Andrew Metalavitch, Polish, laborer, was instantly killed by a fall at face of gangway in the Diamond mine.

October 9, Fred Grana, German, laborer, was killed by a fall of roof, while in the act of helping the miner to restand a discharged prop, West Ridge mine.

October 25, John Korriess, Lithuanian, miner, was killed by falling roof rock, while knocking out a prop with a hammer, Cayuga mine.

December 28, Paul Kisavitch, Polish, miner, was instantly killed at the Von Storch slope by a fall of roof following a blast.

## Cars

January 29, Thomas J. Griffiths, American, company man, was instantly killed at Tripp slope, Diamond mine, by falling under moving mine cars.

March 8, George Youreavidge, Polish, driver, was fatally injured by being squeezed between a car and the pillar on the narrow side of a gangway in the West Ridge mine. Died March 25.

June 5, Frank Bugno, Polish, door man, was killed by a trip of cars at Green Ridge slope, while in the act of opening a mine door, without a light.

October 1, Edward McNamara, American, driver, was fatally injured at the Cayuga mine, while riding with others in a mine car on a down grade. Died October 30.

November 6, William Ollendike, American, company man, was killed by cars on an engine plane inside at Marvine mine.

December 21, Frank Sana, Italian, company man, was killed by being squeezed between railroad cars and the loading platform of the washery at Von Storch colliery.

### Blasts

March 14, Carmine Gindies, Italian, laborer, was killed by a shot fired in an adjoining working place at No. 5 shaft, Pennsylvania Coal Company.

March 17, Taliesin Williams, American, miner, was instantly killed at Von Storch slope, by returning to shot which he thought had missed fire.

March 22, John Roak, Polish, laborer, was killed at Dickson mine by flying coal from a blast. He walked into a neighbor's chamber after the alarm had been given.

May 16, Pregze Vivdenna, Hungarian, miner, was instantly killed at Pancoast mine by flying coal from his own blast.

May 29, John Sepsice, Slavonian, miner, was instantly killed by a blast of coal at Green Ridge slope. The blast exploded just at the instant the miner touched the squib.

August 3, Jeremiah Welton, English, miner, and Charles Parrish, Polish, miner, working on a rock tunnel at the North End mine were instantly killed by returning to the face just as a charge of dynamite exploded.

November 7, Gusti Kuba, Hungarian, miner, was instantly killed at the Pancoast mine, by a blast. He had prepared two shots and thought he heard them explode. He returned to the face and was killed by the flying coal from the second shot.

November 20, Steve Sopt, Polish, laborer, was instantly killed at Tripp slope, Diamond mine, by the flying coal from a blast he fired in the absence of his miner.

November 21, Owen Grogan, American, miner, was killed at Tripp shaft, Diamond mine, by a premature blast caused by the ignition of gas issuing from the hole.

### Falling into Shafts

October 12, Gabor Puckle, Hungarian, laborer, was in the cage with a number of fellow workmen, when he fell off and met his death.

November 14, Thomas Rodway, American, company man, fell into main shaft at Brisbin mine, from the surface vein landing, while in the act of hailing the footmen at a lower "foot".

### Breaker Machinery

October 11, James Jordan, Irish, slate-picker, was fatally injured in a conveyor line at Brisbin breaker, some distance from his post of duty.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

This company has under construction a new breaker to take the place of the present breaker known as the Diamond. When completed the new structure will prepare the output of the Diamond shaft and drift, and the Tripp shaft and slope.

The ventilation of the mines is good, the drainage is properly attended to, and conditions as to safety are good.

## DELAWARE AND HUDSON COMPANY

The workings of the Marvine have been connected with Marvine No. 2 shaft by driving 1,300 feet of narrow work. No. 2 shaft has been concreted to a depth of 70 feet from the surface, and concrete buntons put in place.

Leggitts Creek.—A rock plane was driven from the Rock vein to the Fourteen Foot vein, a distance of 350 feet.

A Jeffries pulverizer has been installed to crush refuse from breaker and flush into the mine workings.

A new engine 14x16 and scraper line has been installed to feed culm from the dump into washery.

Dickson.—A rock plane 450 feet long has been driven from Dunmore No. 4 to Dunmore No. 3 vein.

During the year an addition measuring 24x50 feet was made to the breaker. New towers were erected over the main hoisting and man shafts.

Von Storch.—A 6-inch bore hole 260 feet in depth was drilled into the workings of the Clark vein. This will be used for flushing purposes.

Von Storch Washery.—Two 78-inch locomotive type boilers, and a 14 inch x 16 inch engine and conveyor line were installed during the year.

The ventilation and drainage of the mines are good.

## SCRANTON COAL COMPANY

Mines are well ventilated, roads are good and properly drained.

## PRICE-PANCOAST COAL COMPANY

A new air shaft, 10x14 and 300 feet deep, is being sunk. On this shaft a 20 foot diameter Guibal fan will be erected. This arrangement will not only provide and increase quantity of air all around, but it will also allow the ventilation of the Dunmore veins being duplicated.

A tail rope system of haulage has been installed in the Diamond vein workings. A similar system of haulage is being installed in the Dunmore vein workings.

A new gravity plane 600 feet long has been made in No. 3 vein, and another 350 feet in the Clark vein.

In the Diamond vein a slope has been sunk 800 feet, and a 40 horse-power engine installed to hoist the coal.

The condition of the workings as to ventilation and drainage is good.

## PENNSYLVANIA COAL COMPANY

No. 5 Shaft.—Ventilation and drainage good.

## GREEN RIDGE COAL COMPANY

Ventilation and drainage good.

The remaining mines in the district are ventilated by natural means. The employes work for the most part in scattered groups. Good ventilation is provided under the circumstances.

## A. D. AND F. M. SPENCER

No. 1 Shaft.—Abandoned April 1.

### Mine Foremen's Examinations

The annual examination for certificates of qualification as mine foremen and assistant mine foremen was held in the City Hall, Scranton, Pa., May 17 and 18. The Board was composed of the following members:

H. O. Prytherch, Inspector, Scranton; John Corcoran, Superintendent, Rendham; T. J. McNally, Miner, Old Forge; J. D. Griffiths, Miner, Scranton.

The following persons were recommended for certificates:

#### Mine Foremen

William L. Jones, Taylor; William E. Sunday, Scranton; Edwin J. Shopland, Scranton; William Lavelle, Scranton; Ivor Jones, Scranton; Jos. Paul Jennings, Moosic; Augusta McDade, Scranton; Robert Carson, Scranton; Arch W. Phillips, Scranton; John Hayes, Old Forge; Ed. G. Thomas, Scranton; Walter J. Neimeyer, Scranton; Andrew D. Bryden, Dunmore; William C. Monroe, Scranton; Steward B. Seigle, Pittston; James Kilker, Scranton; Geo. C. Warner, Scranton; Harold A. Jameison, Scranton; Martin Flynn, Scranton; Thos. Sweeney, Scranton; John Sheehan, Moosic; John Feeney, Scranton; A. W. Harris, Taylor.

#### Assistant Mine Foremen

William J. Jenkins, Scranton; Thos. Shrive, Rendham; John H. Hughes, Scranton; Richard J. Reese, Scranton; William E. Markwick, Scranton; Thos. J. Jenkins, Scranton; Robert White, Coyne; David Samuel, Scranton; John White, Old Forge; Frank Mulrooney, Scranton; Robert H. Bonny, Scranton; Samuel Hartshorn, Scranton; M. P. Gannon, Scranton; Walter G. Hughes, Scranton; Geo. Watkins, Scranton; Snyder Owens, Taylor; Rees Lloyd, Scranton; Peter G. Seigle, Dunmore.





## Fourth District

LACKAWANNA COUNTY

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Scranton, Pa., February 15, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith transmitting my report as Inspector of Mines for the Fourth Anthracite District, for the year ending December 31, 1906.

Respectfully submitted,

D. T. WILLIAMS,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	14
Number of mines, .....	27
Number of mines in operation, .....	27
Number of tons of coal shipped to market, .....	4,613,299
Number of tons used at mines for steam and heat, ....	169,438
Number of tons sold to local trade and used by employes,	164,997
Number of tons produced, .....	4,947,734
Number of persons employed inside of mines, .....	7,276
Number of persons employed outside, .....	2,535
Number of fatal accidents inside of mines, .....	36
Number of fatal accidents outside, .....	4
Number of non-fatal accidents inside of mines, .....	70
Number of non-fatal accidents outside, .....	8
Number of tons of coal produced per fatal accident inside, .....	137,437
Number of persons employed per fatal accident inside, ..	202
Number of persons employed per fatal accident outside,	634
Number of persons employed per non-fatal accident inside, .....	104
Number of persons employed per non-fatal accident outside, .....	317
Number of wives made widows, .....	29
Number of children orphaned, .....	72
Number of steam locomotives used outside, .....	13
Number of electric motors used inside, .....	40
Number of fans in use, .....	23
Number of gaseous mines in operation, .....	17
Number of non-gaseous mines in operation, .....	10
Number of old mines abandoned, .....	1

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Delaware, Lackawanna and Western Railroad Company,	4,142,106
People's Coal Company, .....	250,681
Delaware and Hudson Company, .....	255,625
Scranton Coal Company, .....	252,947
Marian Coal Company, .....	46,375
Total, .....	<u>4,947,734</u>

## Production by Counties

Lackawanna, .....	<u>4,947,734</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
D. L. and W. R. R. Co., .....	29	3	32	60	6	66	142,831	69,035	5,902	1,935	7,837	204	645	98	323
People's Coal Co., .....	4	.....	4	2	1	3	62,670	125,340	270	117	387	67	135	135	117
Delaware and Hudson Co., .....	1	1	2	1	.....	2	255,625	255,625	665	259	924	665	259	665	259
Scranton Coal Co., .....	2	.....	2	7	1	8	126,473	36,135	439	189	628	219	63	63	189
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35	35	.....	.....	.....	.....
Totals and averages for district, .....	36	4	40	70	8	78	137,437	70,682	7,276	2,555	9,811	202	634	104	317

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Causes of Accidents Inside													
Falls of coal, .....							1	1			1		3
Falls of slate, .....								1					1
Falls of roof, .....		4	2			1	2	2		4	3	4	23
Mine cars, .....			1		1								2
Explosions of gas and dust, .....											3		3
Explosions of powder and dynamite, .....	1									1			1
Premature blasts, .....		1								1	1		3
Falling into shafts, .....					1								1
Machinery, .....								1					1
Totals, .....	1	5	3		2	1	3	4		5	8	4	36
Causes of Accidents Outside													
Cars, .....		1						1					2
Suffocation by coal gas on culm dump, .....			2										2
Totals, .....		1	2					1					4
Grand totals inside and outside, .....	1	6	5		2	1	3	5		5	8	4	40

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Causes of Accidents Inside													
Falls of coal, .....	1							1		1		1	4
Falls of slate, .....					1								1
Falls of roof, .....	2	1			3	2	2	4	3	3	2	1	22
Mine cars, .....	1	1	2		6	1		4	1	2	1	1	19
Explosions of gas and dust, .....							1				1	2	4
Explosions of powder and dynamite, .....		1			2							1	4
Premature blasts, .....			1		1	2	1		1	2			8
By mules, .....			1		1				1				3
Machinery, .....						1	1	1					3
Miscellaneous, .....							1			2		1	5
Totals, .....	4	3	4		7	11	6	6	7	10	5	7	70
Causes of Accidents Outside													
Cars, .....						1						1	1
Machinery, .....			1								2	1	4
Miscellaneous, .....											2	1	3
Totals, .....			1			1					4	2	8
Grand totals inside and outside, .....	4	3	5		7	12	6	6	7	10	9	9	78



TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Mine foremen, .....	1		1								1	
Fire bosses and assistants, .....		1	2								1	
Miners, .....		3			1	1					3	
Miners' laborers, .....							3	1		1	3	
Drivers and runners, .....											1	
Company men, .....					1			1				1
All other employees, .....												
<b>Totals, .....</b>	<b>1</b>	<b>5</b>	<b>3</b>		<b>2</b>	<b>1</b>	<b>3</b>	<b>4</b>		<b>5</b>	<b>8</b>	<b>4</b>
<b>Outside</b>												
All other employees, .....		1	2					1				
<b>Totals, .....</b>	<b>1</b>	<b>2</b>						<b>1</b>				
<b>Grand totals inside and outside, ....</b>	<b>1</b>	<b>6</b>	<b>5</b>		<b>2</b>	<b>1</b>	<b>3</b>	<b>5</b>		<b>5</b>	<b>8</b>	<b>4</b>

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Miners, .....		1			3	2	1		2	3		2
Miners' laborers, .....	3	1	2		4	4	2	5		3	2	
Drivers and runners, .....			2			1			4	3	3	
Doorboys and helpers, .....						2	1			1	1	1
Company men, .....	1	1				1	2	1	1			
All other employees, .....						1				1		3
<b>Totals, .....</b>	<b>4</b>	<b>3</b>	<b>4</b>		<b>7</b>	<b>11</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>5</b>	<b>7</b>
<b>Outside</b>												
Blacksmiths and carpenters, .....											1	1
Slate pickers (boys), .....											1	
All other employees, .....			1			1					3	1
<b>Totals, .....</b>	<b>1</b>	<b>1</b>	<b>1</b>			<b>1</b>					<b>4</b>	<b>2</b>
<b>Grand totals inside and outside, ....</b>	<b>4</b>	<b>3</b>	<b>5</b>		<b>7</b>	<b>12</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>9</b>	<b>9</b>

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	1						1		1	2		6
English, .....							1	1		1	2		3
Welsh, .....		1	1					1		1	2	1	3
Irish, .....										1	1	1	3
German, .....					1	1							2
Polish, .....		1	2				2	2		2	2	1	12
Italian, .....		1	1										2
Slavonian, .....			1		1							1	3
Lithuanian, .....		1											1
Russian, .....													1
Totals, .....	1	6	5		2	1	3	5		5	8	4	40

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	1	1			2	1		2	2	4	3	17
English, .....					1		1		2		1		3
Welsh, .....					1		1	1	1				11
Irish, .....			1						1	5		1	11
German, .....													2
Polish, .....	2		2		4		3	5			3		23
Italian, .....	1	1								1			7
Slavonian, .....	1	1									1		2
Lithuanian, .....					1								1
Austrian, .....				1									1
Totals, .....	4	3	5		7	12	6	6	7	10	9	9	78

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed in-side	Average number of cubic feet per minute provided for each person
D., L. and W. R. R. Co.																
Archbald, .....	Shaft, .....	Gaseous, .....	Fan, .....	24	8	6	65	1.5			8	190,937	166,347	215,588	340	489
Stoan, .....	Shaft, .....	Gaseous, .....	Fan, .....	21	6	6.9	66	1.75			8	181,900	123,806	201,310	289	428
Central, .....	Shaft, .....	Gaseous, .....	Fan, .....	24	8	6	58	1.4			10	96,570	100,250	117,480	218	332
Continental, .....	Shaft, .....	Gaseous, .....	Fan, .....	14	4	4	135	.6			6	171,416	218,332	218,332	348	581
Hampton, .....	Shaft, .....	Gaseous, .....	Fan, .....	12	4	4	135	.8			5	112,106	138,597	173,694	163	255
Pyne, .....	Shaft, .....	Gaseous, .....	Fan, .....	16	5	4.5	120	1.2			12	126,889	173,694	173,694	443	368
Hyde Park, .....	Shaft, .....	Gaseous, .....	Fans, .....	14	4	4	104	.5			14	76,000	87,550	87,550	200	265
				14	4	4	116	.5			11	184,694	158,843	229,945	238	387
Dodge, .....	Shaft, .....	Gaseous, .....	Fan, .....	16	4.5	4.5	114	1.25	Steam, .....		5	140,760	103,342	163,045	412	385
Holden, .....	Shaft, .....	Gaseous, .....	Fan, .....	23	8	6	59	1.3	Gulbal, .....		5	137,639	94,547	123,474	233	444
Taylor, .....	Shaft, .....	Gaseous, .....	Fans, .....	15	3.5	2	130	.7			3	68,800	58,820	61,226	180	327
Bellevue, .....	Shaft, .....	Gaseous, .....	Fan, .....	12	4	4	132	1			15	237,850	192,630	262,955	524	368
Bellevue, .....	Slope, .....	Gaseous, .....	Fan, .....	13	4.5	4.5	120	.9			2	40,000	30,100	51,900	50	602
National, .....	Shaft, .....	Gaseous, .....	Fan, .....	16	3.5	3.5	100	.5			4	73,600	61,200	68,000	218	280
Meadow Brook, .....	Tunnel, .....	Non-gas, .....	Fan, .....	16	4	4	90	.6			5	59,600	52,000	63,700	133	391
				14	4	4	70	1			4					
People's Coal Co.																
Oxford, .....	Shaft, .....	Gaseous, .....	Fan, .....	16	4.7	4	90	.7	Open run- ning.	Steam, .....	9	137,000	134,000	138,900	229	587
Delaware and Hudson Co.																
Greenwood, New, No. 1, .....	Shaft, .....	Gaseous, .....	Fan, .....	17	5	5	75	.5	Gulbal, .....	Steam, .....	3	38,400	35,700	42,000	119	360
Greenwood, Old, No. 1, .....	Shaft, .....	Non-gas, .....	Natural, .....								2	29,400	27,500	31,700	101	272
Greenwood No. 12, .....	Drift, .....	Non-gas, .....	Natural, .....								1	14,500	13,000	15,200	65	209



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
D., L. and W. R. R. Co. Archbald, ..... Sloan and Central, ..... Continental, ..... Hampton, ..... Pyne, ..... Hyde Park, ..... Hodge, ..... Holden, ..... Taylor, ..... Bellevue, ..... National, .....	Lackawanna, ...	R. A. Phillips, ....	Scranton, .....	{ Thomas J. Williams, Thomas J. Williams, Thomas J. Williams, Thomas J. Williams, Thomas J. Williams, Evan J. Evans, ..... Evan J. Evans, ..... Evan J. Evans, ..... Evan J. Evans, ..... Evan J. Evans, ..... Evan J. Evans, ..... Evan J. Evans, .....	Scranton, .....	D., L. and W.
Washeries Hampton, ..... Pyne, ..... Bellevue, ..... Taylor, ..... Hyde Park, .....	Lackawanna, ...	R. A. Phillips, ....	Scranton, .....	{ Fred C. Smith, ..... Thomas J. Williams, ..... Fred C. Smith, ..... Fred C. Smith, ..... Thomas J. Williams, }	Scranton, .....	D., L. and W.
People's Coal Co. Oxford, .....	Lackawanna, ...	James G. Shepard, .....	Scranton, .....	John G. Hayes, .....	Scranton, .....	D., L. and W.
Delaware and Hudson Co. Greenwood Nos. 1 and 2, .....	Lackawanna, ...	C. C. Rose, .....	Scranton, .....	John Lovering, .....	Greenwood, ....	Delaware and Hudson
Capouse, ..... Capouse washery, .....	Lackawanna, ...	W. L. Allen, .....	Peckville, .....	John Van Bergen, .....	Scranton, .....	Ontario and Western
Marian Coal Co. Marian washery, .....	Lackawanna, ...	W. P. Boland, ....	Scranton, .....	F. J. Holleran, .....	Scranton, .....	D., L. and W.



TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
D., L. and W. R. R. Co.	Archbald, .....	354,325	10,309	498	375,132	208	812	4	10	18,220	1,237	94
	Sloan and Central, .....	392,277	.....	307	392,584	219	896	6	8	15,088	3,400	54
	Continental, .....	212,819	1,053	3,031	215,966	214	595	2	3	9,977	3,955	76
	Hampton, .....	124,610	.....	385	124,995	172	379	2	2	5,456	5,422	50
	Pyne, .....	482,824	21,554	2,045	506,433	225	786	3	2	14,830	1,445	66
	Hyde Park, .....	268,467	5,123	19,617	293,207	225	679	3	7	12,792	6,225	67
	Dodge, .....	222,456	4,00	133	323,669	223	692	6	11	16,290	2,800	66
	Holden, .....	221,264	13,842	1,082	235,228	207	467	4	5	8,082	2,550	63
	Taylor, .....	270,495	21,740	6,883	299,118	192	710	2	9	11,488	2,500	79
	Bellevue, .....	415,819	500	16,201	432,610	239	976	2	9	17,882	9,422	60
Washeries	National, .....	69,218	14,435	4,749	88,402	97	565	.....	4	5,395	10,290	64
	Totals, .....	3,148,154	89,066	55,044	3,292,264	.....	7,357	31	66	135,510	41,959	739
Lackawanna,	Bellevue, .....	362,165	.....	.....	362,165	261	56	.....	.....	2	53	4
	Taylor, .....	214,889	8,440	.....	223,329	321	70	.....	.....	8	10	5
	Hampton, .....	536,235	.....	.....	536,235	273	57	1	.....	.....	.....	2
	Pyne, .....	86,572	7,806	.....	94,378	215	19	.....	.....	.....	.....	.....
	Hyde Park, .....	18,764	.....	.....	18,764	67	21	.....	.....	.....	.....	.....
	Totals, .....	833,636	16,206	.....	849,842	.....	223	1	.....	10	63	11
Lackawanna,	Dodge Roller Plant, .....	.....	.....	.....	.....	.....	22	.....	.....	.....	.....	.....
	Central Roller Plant, .....	.....	.....	.....	.....	.....	29	.....	.....	.....	.....	.....
	Central Water Shaft, .....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....
Totals, .....		3,981,790	105,272	55,044	4,142,106	.....	7,337	32	66	135,520	42,022	750

TABLE 2. Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Oxford, .....	Lackawanna, ...	132,965	14,190	103,526	250,631	240	337	4	3	11,175	11,000	120
People's Coal Co. ....												
Delaware and Hudson Co. ....												
Greenwood Nos. 1 and 2, .....	Lackawanna, {	183,621	28,700	2,671	214,992	150	830	2	1	18,082	30,120	122
Greenwood washery, .....		40,633			40,633	102	44					
Totals, .....		224,254	28,700	2,671	255,625		924	2	1	18,082	30,120	122
Scranton Coal Co. ....												
Capouse, .....	Lackawanna, {	161,307	14,000	2,735	178,042	119	588	2	8	8,325	31,475	69
Capouse washery, .....		69,357	5,500	48	74,905	112	40					
Totals, .....		230,664	19,500	2,783	252,947		628	2	8	8,325	31,475	69
Marian Coal Co. ....												
Marian washery, .....	Lackawanna, ...	43,626	1,776	973	46,375	148	35					1
Grand totals, .....		4,613,299	169,438	164,997	4,947,734		9,811	40	78	173,102	114,617	1,062

TABLE 2.—Recapitulation

D., L. and W. R. R. Co., .....	3,981,790	105,972	55,044	4,142,106	7,927	32	66	135,520	42,022	750
People's Coal Co., .....	132,965	14,190	103,526	250,631	240	337	4	3	11,175	11,000
Delaware and Hudson Co., .....	224,254	28,700	2,671	255,625	150	830	2	1	18,082	30,120
Scranton Coal Co., .....	230,664	19,500	2,783	252,947	119	588	2	8	8,325	31,475
Marian Coal Co., .....	43,626	1,776	973	46,375	148	35				
Totals, .....	4,613,299	169,438	164,997	4,947,734	9,811	40	78	173,102	114,617	1,062

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
D., L. and W. R. R. Co., .....	{ Lackawanna, ... }	20	810	60	14,107	14,917	10	.....	40	19,842	35	36,579	13,991	14	2
People's Coal Co., .....		5	1,590	.....	.....	1,590	.....	.....	14	857	3	1,575	750	2	1
Delaware and Hudson Co., .....		27	810	7	760	1,516	3	.....	48	1,703	5	2,550	1,600	2	2
Scranton Coal Co., .....		.....	.....	7	1,170	1,170	.....	.....	10	1,080	9	5,875	5,075	2	1
Marian Coal Co., .....		.....	.....	2	160	160	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....		52	3,130	76	16,137	19,237	13	.....	302	23,482	52	46,579	31,416	18	6

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (days)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
D., L. and W. R. R. Co.	Lackawanna,...	1	1	4	229	229	83	12	2	49	49	659	....	2	3	9	42	19	4	69	153	812
		3	1	5	245	245	50	12	8	24	122	717	....	1	4	9	50	8	2	103	179	896
		1	1	3	150	152	69	11	2	44	35	468	....	1	7	2	37	7	3	50	127	595
		1	1	2	93	93	23	7	2	13	42	277	....	1	4	3	57	12	2	45	102	379
		1	1	5	198	210	38	4	2	65	53	577	....	2	10	12	47	38	3	96	209	786
		2	1	1	191	196	63	21	2	35	45	559	....	1	6	24	44	8	3	62	133	692
		1	1	3	165	165	73	10	3	41	66	531	....	1	6	8	55	10	3	79	148	679
		1	1	3	122	124	48	4	2	9	15	327	....	1	7	14	43	7	3	97	172	710
		2	3	3	197	185	51	29	3	43	34	538	....	2	7	14	70	12	4	99	206	976
		1	2	2	139	139	68	13	3	31	48	446	....	1	6	8	46	....	2	56	119	565
		17	7	40	1,991	2,003	628	131	39	381	639	5,869	....	15	74	107	527	121	31	813	1,688	7,557
Washeries	Lackawanna,...	1							6	....	7	....	1	2	8	6	....	1	32	50	57	19
		1									7	8	1	1	4	....	....	41	48	56	19	
		1	1								3	5	41	1	2	5	2	1	54	65	70	
											8	8	....	1	2	1	....	9	13	21	21	
		3			1					6	18	28	....	4	5	21	10	1	3	151	195	293
														....	....	....	....	....	....	....	....	....







TABLE 4.—Fatal accidents inside and outside of mines

Date of Accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 19	John Hughes, .....	American,...	Miner, .....	26	S.	.....	.....	Bellevue, .....	Lackawanna,...	Killed by an explosion of powder while making a cartridge with lamp upon his head.
Feb. 6	Thomas Phelps, .....	Welsh,.....	Miner, .....	17	M.	1	7	Archbald, .....	Lackawanna,...	Fatally injured by fall of roof at face of chamber in Diamond vein. Died Feb. 21.
9	Michael Koles, .....	Polish,.....	Laborer, ...	27	S.	.....	.....	Pyne, .....	Lackawanna,...	Fatally injured by flying coal from blast at a point 200 feet from face of chamber. Died same day.
17	Geo Stuck, .....	Italian,.....	Out. laborer, ...	24	S.	.....	.....	Hampton Cold Storage, .....	Lackawanna,...	Instantly killed by falling under railroad car. Outside.
21	Fred Carpenter, .....	American,...	Miner, .....	49	M.	1	.....	Oxford, .....	Lackawanna,...	Fatally injured by fall of roof at face of chamber in Diamond vein. Died August 23.
23	John Janitas, .....	Lithuanian,...	Laborer, ...	36	M.	1	2	Continental, .....	Lackawanna,...	Fatally injured by fall of roof at face of chamber. Died next day.
25	Anthony Wassel, .....	Russian,.....	Laborer, ...	38	M.	1	5	Hyde Park, .....	Lackawanna,...	Killed by fall of roof at face of chamber in New County vein.
March 24	Vincenzo Parrea .....	Italian,.....	Laborer, ...	23	S.	.....	.....	Oxford, .....	Lackawanna,...	Killed by fall of roof at face of chamber in No. 2 Dunmore vein.
26	John T. Jones, .....	Welsh,.....	Fire boss, ...	30	M.	1	.....	Dodge, .....	Lackawanna,...	Killed by being run over by a trip of mine cars. (These two men were using a hose line to put out fire on culm dump. They laid down and fell asleep and were suffocated from coal gas arising from fire on the dump. Coroner's jury rendered a verdict of accidental death. Outside.)
27	George Barney, .....	Polish,.....	Out. laborer, ...	28	M.	1	.....	Dodge, .....	Lackawanna,...	
27	George Isack, .....	Polish,.....	Out. laborer, ...	23	S.	.....	.....	Dodge, .....	Lackawanna,...	
28	George Demko, .....	Slavonian,...	Laborer, ...	36	M.	1	5	Taylor, .....	Lackawanna,...	Fatally injured by fall of roof at face of chamber. Died April 4.
May 12	Anthony Woznoek, ...	Slavonian,...	Miner, .....	42	M.	1	4	Dodge, .....	Lackawanna,...	Killed by falling off mine cage from near surface to bottom of shaft, a distance of 275 feet.
15	August Shaffer, .....	German,.....	Motorman, ...	33	M.	1	2	Bellevue shaft, ...	Lackawanna,...	Fatally injured by being crushed between electric motor and trip of loaded cars. Died May 31.

TABLE 4.—Continued

Date of Accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
June 14	Anthony Stulp, .....	German, .....	Miner, .....	40	M.	1	1	Capouse, .....	Lackawanna, ...	Fatally injured by fall of roof at face of chamber in Big vein. Died August 4.
July 17	Michael Poploski, ....	Polish, .....	Laborer, ...	24	S.	....	....	Hyde Park, .....	Lackawanna, ...	Fatally injured by fall of roof at face of chamber. Died July 27.
24	George Nowicki, .....	Polish, .....	Laborer, ...	45	M.	1	4	Continental, .....	Lackawanna, ...	Killed by fall of roof at face of chamber.
30	William Strive, .....	English, .....	Laborer, ...	36	M.	1	1	Hampton, .....	Lackawanna, ...	Killed by fall of top coal while working through pillar in Rock vein.
Aug. 1	David Hopkins, .....	Welsh, .....	Miner, .....	63	M.	1	....	Hampton, .....	Lackawanna, ...	Killed by fall of bony at face of chamber in Rock vein.
4	William J. Phillips, ..	American, ...	Drakeman, ..	20	S.	....	....	Sloan, .....	Lackawanna, ...	Instantly killed by falling under electric light while attempting to jump on front end while it was in motion.
7	Alfred Cox, .....	English, .....	Miner, .....	28	M.	1	1	Hyde Park, .....	Lackawanna, ...	Killed at face of counter in Rock vein while examining the roof after firing a blast.
21	George Saffron, .....	Polish, .....	Laborer, ...	43	S.	....	....	Taylor, .....	Lackawanna, ...	Instantly killed by fall of roof at face of chamber in Rock vein.
23	George Smigalski, ....	Polish, .....	Out. laborer, ..	35	M.	1	3	Greenwood, .....	Lackawanna, ...	Fatally injured by being squeezed between two cars at foot of culm plane. Died August 24. Outside.
Oct. 3	Martin McNicholas, ...	Irish, .....	Miner, .....	33	M.	1	3	Archbald, .....	Lackawanna, ...	Instantly killed by fall of roof at face of chamber in Diamond vein.
6	John G. Phillips, .....	Welsh, .....	Miner, .....	46	M.	1	4	Sloan, .....	Lackawanna, ...	Killed by tying piece of coal from blast.
18	Albert Yanigo, .....	Polish, .....	Miner, .....	45	M.	1	....	Oxford, .....	Lackawanna, ...	Killed by fall of roof at face of chamber in No. 3 Dunmore vein.
30	William Koflinsky, ....	American, ...	Miner, .....	25	M.	1	2	Oxford, .....	Lackawanna, ...	Instantly killed by fall of roof at face of chamber in No. 2 Dunmore vein.
31	Joseph Obyinski, .....	Polish, .....	Laborer, ...	39	M.	1	3	Dodge, .....	Lackawanna, ...	Fatally injured by fall of roof at face of chamber in big vein. Died same night.
Nov. 3	John Ewaska, .....	Polish, .....	Laborer, ...	29	S.	....	....	Capouse, .....	Lackawanna, ...	Killed by fall of roof at face of chamber while robbing pillars.
13	George Jenkins, .....	American, ...	Miner, .....	22	M.	1	....	Sloan, .....	Lackawanna, ...	Instantly killed by premature blast at face of chamber in Surface vein.
15	William Bushing, .....	American, ...	Driver, .....	28	M.	1	2	Central, .....	Lackawanna, ...	Fatally injured by an explosion of gas in old workings of Clark vein. Died November 6. Coroner's jury rendered a verdict of accidental death.

Nov. 17	Martin Coyne, .....	Irish, .....	Miner, .....	63	M.	1	6	Dodge, .....	Lackawanna, ...	Killed at face of chamber by fall of roof while knocking out a prop.
21	Benjamin G. Evans, ...	Welsh, .....	Mine fore- man, .....	41	M.	1	3	Central, .....	Lackawanna, ...	Killed by an explosion of gas.
21	Evan J. Williams, ....	Welsh, .....	Fire boss, ..	54	M.	1	}	Greenwood, .....	Lackawanna, ...	Killed by fall of roof at face of chamber.
26	Anthony Scutic, .....	Polish, .....	Laborer, ....	20	S.	1		Pyne, .....	Lackawanna, ...	Killed by fall of coal at face of chamber.
27	Thomas Evans, .....	Welsh, .....	Miner, .....	32	M.	1		Taylor, .....	Lackawanna, ...	Killed by fall of roof at face of gang- way.
1	Stephen Yasinback, ..	Slavonian, ...	Laborer, ....	25	M.	1	4	Archbald, .....	Lackawanna, ...	Killed by fall of roof at face of chamber.
4	John Grip, .....	Polish, .....	Laborer, ....	45	M.	1	4	Archbald, .....	Lackawanna, ...	Killed by fall of roof at face of chamber.
22	John Henley, .....	Irish, .....	Miner, .....	38	S.	1	4	Taylor, .....	Lackawanna, ...	Killed by fall of roof on main haulage road.
22	John M. Thomas, ....	Welsh, .....	Mason, ....	52	M.	1				

Dec.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of Accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	4 John Rosko, .....	Polish, .....	Laborer, .....	27	S.	Sloan, .....	Lackawanna, ...	Injured internally by fall of coal at face of chamber.
8	Thomas Duskie, .....	Polish, .....	Laborer, .....	23	S.	Archbald, .....	Lackawanna, ...	Leg fractured by fall of roof.
23	John Harris, .....	American, .....	Company man, .....	28	M.	Hyde Park, .....	Lackawanna, ...	Severely injured by being squeezed between electric motor and empty car.
Feb.	27 Charles Bartoli, .....	Italian, .....	Laborer, .....	29	S.	Monday Brook, .....	Lackawanna, ...	Leg fractured by fall of roof.
3	Ezra Cann, .....	American, .....	Footman, .....	33	S.	Archbald, .....	Lackawanna, ...	Thumb and three fingers badly crushed by falling iron over by mine car.
27	Paolino Carducci, .....	Italian, .....	Laborer, .....	25	S.	National, .....	Lackawanna, ...	Right dislocated by fall of roof.
27	Charles Vilanto, .....	Slovakian, ...	Miner, .....	25	M.	Taylor, .....	Lackawanna, ...	Arms and hands burned by explosion of powder.
March	3 John Mora, .....	Austrian, ...	Sweeper, .....	17	S.	Linden breaker, ...	Lackawanna, ...	Arm fractured by machinery in breaker, outside.
7	Thomas Killouski, .....	Polish, .....	Laborer, .....	25	S.	Greenwood, .....	Lackawanna, ...	Shoulder blade broken by cars.
12	Richard Dunn, .....	Polish, .....	Driver, .....	21	S.	Archbald, .....	Lackawanna, ...	Injured internally by cars.
13	John Lazuski, .....	Polish, .....	Laborer, .....	21	M.	Dodge, .....	Lackawanna, ...	Skull fractured by flying coal from blast.
14	Michael M. Phillips, .....	American, ...	Driver, .....	29	M.	Continental, .....	Lackawanna, ...	Nose broken by being kicked by mule.
May	15 Michael Gaudin, .....	Polish, .....	Laborer, .....	28	M.	Hampton, .....	Lackawanna, ...	Leg fractured by fall of roof.
16	Michael Gaudin, .....	Lithuanian, ...	Laborer, .....	27	M.	Hampton, .....	Lackawanna, ...	Leg fractured by fall of roof.
17	Clusman Shmucker, .....	German, .....	Laborer, .....	45	M.	Hyde Park, .....	Lackawanna, ...	Leg fractured by flying coal from blast.
24	John Guzal, .....	Polish, .....	Miner, .....	37	M.	Hyde Park, .....	Lackawanna, ...	Both legs fractured by fall of bony powder exploding.
24	John Guzal, .....	Polish, .....	Miner, .....	30	M.	Relieve shaft, ...	Lackawanna, ...	Slightly burned on hands and face by powder exploding.
29	Frank Shureck, .....	Polish, .....	Laborer, .....	42	M.	Dodge, .....	Lackawanna, ...	Leg fractured by fall of roof.
June	1 John Williams, .....	Welsh, .....	Laborer, .....	17	S.	Balden, .....	Lackawanna, ...	Leg fractured by cars.
2	Albert Lloyd, .....	American, ...	Helper, .....	17	S.	Hyde Park, .....	Lackawanna, ...	Leg cut off by cars.
5	Peter Sylvester, .....	Irish, .....	Laborer, .....	18	S.	Caboose, .....	Lackawanna, ...	Knee fractured by flying coal from blast.
6	Patrick Dunleavy, .....	Irish, .....	Miner, .....	46	M.	Continental, .....	Lackawanna, ...	Clavicle fractured and two ribs broken by cars.
8	Patrick Brown, .....	Irish, .....	Doorman, .....	50	M.	Relieve shaft, ...	Lackawanna, ...	Compound fracture of leg by cars.
13	Joseph Lact-elami, .....	Italian, .....	Laborer, .....	29	M.	National, .....	Lackawanna, ...	Leg fractured by cars.
16	Lukas Padrick, .....	Polish, .....	Miner, .....	48	M.	Dodge, .....	Lackawanna, ...	Leg fractured by fall of roof.
18	Michael Conoski, .....	Polish, .....	Laborer, .....	46	M.	Pype, .....	Lackawanna, ...	Arm fractured by flying coal from blast.
19	Patrick Ruddy, .....	Irish, .....	Car roller, .....	65	M.	National, .....	Lackawanna, ...	Mule broken, bruised about shoulder and head cut by cars. Outside.



June	22	Mike Senoski, .....	Polish, .....	Laborer, .....	18	S. M., .....	Central, .....	Lackawanna, .....	Ankle fractured by fall of roof.
	28	Thomas Davison, .....	American, .....	Company man, .....	24	M., .....	Dodge, .....	Lackawanna, .....	Leg fractured by machinery.
July	30	Fred Tanner, .....	German, .....	Asst. driver boss, .....	24	S. M., .....	Bellevue shaft, .....	Lackawanna, .....	Leg fractured by cars.
	11	John R. Evans, .....	Welsh, .....	Company miner, .....	30	M., .....	Bellevue shaft, .....	Lackawanna, .....	Collar bone and shoulder blade fractured by fall of roof.
	12	Thomas Evans, .....	American, .....	Helper, .....	17	S., .....	Oxford, .....	Lackawanna, .....	Collar bone and two ribs fractured by being squeezed between car and mule.
	14	James Smithinski, .....	Polish, .....	Miner, .....	34	M., .....	Dodge, .....	Lackawanna, .....	Illus biven and cut on head by fall of roof.
	17	Paul Foxo, .....	Polish, .....	Laborer, .....	36	M., .....	Taylor, .....	Lackawanna, .....	Seriously injured by blast blowing through roof.
	22	John Harris, .....	English, .....	Company man, .....	50	M., .....	Central, .....	Lackawanna, .....	Three ribs fractured by coming in contact with electric wire and being thrown against a car.
Aug.	25	Andrew Ignatz, .....	Polish, .....	Laborer, .....	12	M., .....	Arnsbald, .....	Lackawanna, .....	Hands and face burned by gas.
	2	George Sholler, .....	Polish, .....	Laborer, .....	36	M., .....	Arnsbald, .....	Lackawanna, .....	Leg fractured by fall of roof.
	3	Joseph Bradish, .....	Polish, .....	Laborer, .....	31	M., .....	Arnsbald, .....	Lackawanna, .....	Arm fractured by fall of roof.
	18	Thomas Prusser, .....	Welsh, .....	Company man, .....	50	M., .....	Dodge, .....	Lackawanna, .....	Shoulder dislocated by falling into sump at foot of shaft.
	21	Frank Sulesky, .....	Polish, .....	Laborer, .....	29	S., .....	Capouse, .....	Lackawanna, .....	Leg fractured by fall of coal.
	21	Frank Sulesky, .....	Polish, .....	Laborer, .....	29	S., .....	Capouse, .....	Lackawanna, .....	Thigh dislocated by fall of roof.
	25	Frank Morris, .....	Polish, .....	Laborer, .....	32	S., .....	Sholt, .....	Lackawanna, .....	Leg fractured by fall of roof.
	25	Louis W. Price, .....	Welsh, .....	Miner, .....	43	M., .....	Hold n., .....	Lackawanna, .....	Arm fractured by fall of roof.
Sept.	1	John Griffiths, .....	Welsh, .....	Company man, .....	57	M., .....	Hampton, .....	Lackawanna, .....	Compound fracture of leg by flying rock from blast.
	7	Samuel Griffiths, .....	American, .....	Laborer, .....	17	S., .....	Taylor, .....	Lackawanna, .....	Leg and body injured by cars.
	7	Richard Mogg, .....	English, .....	Miner, .....	47	M., .....	Arnsbald, .....	Lackawanna, .....	Injured internally by fall of roof.
	10	Patrick Coyne, .....	Irish, .....	Driver, .....	17	S., .....	Redell, .....	Lackawanna, .....	Leg fractured by being thrown out of mine car.
	13	George Griffiths, .....	Welsh, .....	Driver, .....	19	S., .....	Bellevue shaft, .....	Lackawanna, .....	Arm broken and injured internally by being struck by falling under mine car.
Oct.	25	Robert Moran, .....	American, .....	Runner, .....	25	S., .....	Hyde Park, .....	Lackawanna, .....	Chest and body bruised by being struck by mine car.
	9	Matthew Moran, .....	Irish, .....	Runner, .....	19	S., .....	Capouse, .....	Lackawanna, .....	Skull fractured by being kicked by mule.
	11	Guido Curiel, .....	Italian, .....	Dodley, .....	16	S., .....	Dodge, .....	Lackawanna, .....	Arm fractured by falling of mule.
	12	James Lavelle, .....	American, .....	Miner, .....	17	S., .....	Hyde Park, .....	Lackawanna, .....	Leg fractured by fall of bone.
	16	Michael Ferriek, .....	Irish, .....	Miner, .....	31	M., .....	Capouse, .....	Lackawanna, .....	Head and back lacerated by fall of roof.
	23	James Valuzis, .....	Polish, .....	Driver, .....	21	M., .....	Hyde Park, .....	Lackawanna, .....	Leg and thigh fractured by flying coal from blast.
	24	William Morgan, .....	Welsh, .....	Miner, .....	40	M., .....	Dodge, .....	Lackawanna, .....	Scull fractured by flying coal from blast.
	25	Michael Puffy, .....	Irish, .....	Runner, .....	35	S., .....	Lodge, .....	Lackawanna, .....	Contusion of leg and laceration of chin by fall of roof.
	26	Owen O'Donnell, .....	Irish, .....	Laborer, .....	36	M., .....	Arnsbald, .....	Lackawanna, .....	Law injured by being struck by T rail.
	26	Joseph Reid, .....	American, .....	Drakehan, .....	21	S., .....	Shan, .....	Lackawanna, .....	Fracture of collar bone, dislocation of knee and puncture of leg by fall of roof.
	27	John Judge, .....	Irish, .....	Laborer, .....	38	M., .....	Bellevue shaft, .....	Lackawanna, .....	Leg fractured by fall of roof.
Nov.	3	Ignatz Stancheski, .....	Polish, .....	Laborer, .....	25	S., .....	Dodge, .....	Lackawanna, .....	Arm fractured by being caught in machinery, outside.
	3	Arthur Aston, .....	American, .....	Slate picker, .....	17	S., .....	Taylor breaker, .....	Lackawanna, .....	Arm fractured by being caught between car and rib.
	5	Michael Shipton, .....	English, .....	Driver, .....	16	S., .....	Capouse, .....	Lackawanna, .....	Leg cut and ankle bruised by falling sheet iron.
	6	John Wetzel, .....	American, .....	Teamster, .....	52	M., .....	Continental (lumber yard), .....	Lackawanna, .....	

TABLE 5.—Continued

Date of Accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Nov. 13	Harry Lynn, .....	American...	Driver, .....	25	M.	Central, .....	Lackawanna...	Turned by explosion of gas.
14	Charles Godshall, .....	American...	Coal inspector, ....	41	S.	Bellevue breaker,...	Lackawanna...	Fracture of shoulder bone by falling of platform under breaker. Outside.
17	John Koplinski, .....	Polish.....	Laborer, .....	23	M.	Dodge, .....	Lackawanna...	Leg fractured by fall of roof.
26	Andrew Lesko, .....	Polish.....	Driver, .....	23	S.	Archbald, .....	Lackawanna...	Leg fractured by cars.
26	Charles Marshak, .....	Slavonian...	Picker tender, ....	17	S.	Archbald breaker,...	Lackawanna...	Dislocation of ankle by being caught in belt pulley of patent slate picker. Outside.
Dec. 14	Michael Murry, .....	American...	Footman, .....	23	M.	Sloan, .....	Lackawanna...	Arm fractured by piece of coal falling down shaft.
14	James Black, .....	American...	Doorboy, .....	17	S.	Sloan, .....	Lackawanna...	Ankle dislocated by falling under mine car.
16	Phillip Foster, .....	Welsh.....	Electrician, .....	26	M.	Bellevue shaft, ...	Lackawanna...	(Burned by an explosion of gas while putting up trolley wire on main road.
16	George Thomas, .....	Welsh.....	Helper, .....	35	M.	Oxford, .....	Lackawanna...	Feet and chest badly burned by powder.
20	Soldace Marie, .....	Italian....	Miner, .....	58	S.	Oxford, .....	Lackawanna...	Struck on leg by a piece of broken wheel.
20	Fred Wennerth, .....	American...	Carpenter, .....	41	M.	Oxford, .....	Lackawanna...	Leg tied to be amputated. Outside.
22	Thomas R. Jones, .....	Welsh.....	Company man, ...	56	M.	Taylor shaft, ....	Lackawanna...	Seriously injured by fall of roof on main road.
29	August Nikoleti, .....	Italian....	Miner, .....	25	M.	Capouse, .....	Lackawanna...	Spine fractured by fall of top coal.
30	Patrick Haggerty, .....	Irish.....	Ashman, .....	40	M.	Capouse, .....	Lackawanna...	Leg fractured by door of ash pit falling upon it. Outside.

## FATAL ACCIDENTS

## By Falls of Coal, Roof and Slate

February 6, Thomas Phelps, Welsh, miner, in Archbald shaft, Delaware, Lackawanna and Western Coal Company, was fatally injured by a fall of roof. He was in the act of working out a piece of mining coal, when a piece of roof fell on him. Died February 21.

February 21, Fred Carpenter, American, miner, in Oxford shaft, People's Coal Company, was fatally injured by a fall of roof at face of chamber Diamond vein. He had just fired a blast and went under a piece of roof which he had tested, before he started to work. About five minutes after the roof fell on him. Died August 23.

February 23, John Janitas, Lithuanian, laborer, was fatally injured in the Continental mines of the Delaware, Lackawanna and Western Coal Company. He was throwing back coal from the face of the chamber, when a piece of roof fell on him.

February 26, Anthony Wassel, Russian, laborer, in Hyde Park shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof at face of chamber, New County vein, while loading a car.

March 24, Vincenzo Parrea, Italian, miner, at the Oxford shaft of the People's Coal Company, was instantly killed by a fall of roof at face of chamber in No. 2 Dunmore vein. He was taking a skip off the left side of the chamber, and had just fired a blast which discharged three props. He went to mine out a piece of coal when the roof fell on him.

March 28, George Demko, Slavonian, laborer, at Taylor shaft, Delaware, Lackawanna and Western Coal Company, was fatally injured by a fall of roof at face of chamber in the Big vein. He was working with his brother. They both examined the roof and thought it unsafe, and took two drills and tried to pull it down but failed. The miner then went to drill a hole, and the laborer to load a car, and while in the act of doing so, the roof fell on him. Died April 4.

June 14, Anthony Stilp, German, miner, at the Capouse shaft of the Scranton Coal Company, was fatally injured by a fall of roof at face of chamber in the Big vein. He was in the act of picking up his tools to start a hole, when a piece of roof fell on him. Died August 4.

July 17, Michael Poploski, Polish, laborer, at Hyde Park shaft, Delaware, Lackawanna and Western Coal Company, was fatally injured by a fall of roof at face of chamber New County vein. He went into the adjoining chamber to help his fellow workman to load the last car for the day, when a piece of roof fell on him. Died July 27.

July 24, George Nowicki, Polish, laborer, at Continental shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof eighteen feet back from face of chamber. He was sitting down along side of the gob when a piece of roof fell between two props and caught him underneath.

July 30, William Shrive, English, laborer, at the Hampton shaft, of the Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of top coal in the Rock vein. He and two

other men were driving through a pillar for the purpose of shortening the haulage road. At 5:30 P. M. the miner fired a blast in the bottom coal. They then tried to pull a piece of top coal down, but failed, and while the victim and his brother were loading a car, a piece of top coal discharged from the rib and fell on him.

August 1, David Hopkins, Welsh, miner, at Hampton shaft, Delaware, Lackawanna and Western Coal Company, was killed by a fall of roof at face of chamber in Rock vein. He was in the act of fastening the machine bar to drill a hole in the bottom coal, which a previous blast failed to cut, when a piece of roof fell on him. Died the same day.

August 7, Alfred Cox, English, miner, at Hyde Park shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof in the Rock vein. He had fired an eighteen inch plug in a stump of coal at the face of counter which was supporting the edge of a rock saddle. When he returned to examine the result of the blast and was in the act of examining the roof, it fell on him.

August 21, George Saffron, Polish, laborer, at Taylor shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof in the Rock vein, while he was engaged in loading a car of coal.

October 2, Martin McNicholas, Irish, miner, at the Archbald shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof in the Diamond vein. He had fired a blast and had gone to the face of the chamber when a piece of roof fell on him. If he had been more cautious on entering the place after firing the blast, the accident might have been avoided.

October 18, Albert Yanigo, Polish, miner, at the Oxford shaft, People's Coal Company, was instantly killed at face of chamber in No. 3 Dunmore vein at about 10 o'clock A. M. He was drilling a hole when a large piece of roof fell on him. This accident could have been avoided if the victim had examined the roof before starting to work.

October 30, William Kottinsky, American, miner, at Oxford shaft, People's Coal Company, was instantly killed by fall of roof at face of chamber in No. 2 Dunmore vein. He had just fired a blast, and had returned to the face of the chamber, when a large piece of roof fell on him. Had he examined the roof this accident could have been avoided.

October 31, Joseph Obyinski, Polish, laborer, at Dodge shaft, Delaware, Lackawanna and Western Coal Company, was fatally injured by fall of roof. He and his miner had retired to a cross-cut after firing a blast, and when they went back to the face of the chamber they found the roof working. They then waited for some time for the roof to settle, and when they thought every thing was right, they then began to prepare some coal to load a car, when a large portion of the roof fell on Obyinski, inflicting injuries from which he died the same day. This accident could have been avoided had the miner taken more care to examine the roof after firing.

November 3, John Ewaska, Polish, laborer, at Capouse shaft, Scranton Coal Company, was instantly killed by a fall of roof in the Diamond vein. Ewaska and his miner were taking out pillars. They noticed a piece of roof which they thought was not safe, and taking



drills tried to pull it down, but failed. They then stood a prop under it and thought every thing was safe, and started to load a car when the roof broke near the prop and fell on Ewaska. This accident was unavoidable.

November 17, Martin Coyne, Irish, miner, at Dodge shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof in the New County vein. Coyne and his laborer had stood a prop under a piece of roof that was bad. He decided to move the props in farther, and while knocking it out the roof fell on them both, killing Coyne instantly, and fracturing the laborer's leg. This accident was due to pure carelessness on part of the miner.

November 26, Anthony Sentaic, Polish, laborer, at Greenwood No. 12 drift, Delaware and Hudson Coal Company, was fatally injured by fall of roof in No. 2 Dunmore vein. He and his miner were taking down roof in the face of the chamber. The miner noticed that a prop was needed on the side of the chamber, and told the laborer to stand in the middle of the road until he got a prop. While the miner was getting the prop, the roof fell on the laborer inflicting injuries from which he died November 27.

November 27, Thomas Evans, Welsh, miner, at Pyne shaft, Delaware, Lackawanna and Western Coal Company, was fatally injured by a fall of top coal at face of chamber in New County vein. Evans was standing at face of chamber with his back towards the face talking to his laborer, when a piece of top coal fell out of the face without any warning striking him on the shoulder and body, inflicting injuries from which he died same night.

December 1, Stephen Yasinback, Slavonian, laborer, at Taylor shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof at face of chamber in Clark vein, while loading a car. This accident was due to carelessness on part of the miner. About two hours before the accident the mine foreman was in the chamber and told him to stand a prop under the stone at once, which he failed to do. Had he done so, this accident would have been avoided.

December 4, John Grip, Polish, laborer, at Archbald shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof at face of chamber in the Rock vein. The miner had drilled a hole in the roof to blast it down, but Grip insisted that it should not be done as he had a car of clean coal ready and did not want the roof blasted down to dirty the coal. The miner thinking he was doing the laborer a favor, went home and left the roof up, and about 4 P. M. it fell. This accident was due to insufficient care on part of the miner as he should have blasted the roof down or propped it up.

December 22, John Henley, Irish, miner, at Archbald shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed at face of chamber in Rock vein. He was working alone in the chamber and had just fired a blast. He went back to the face to find the result of the blast, when a piece of the falling roof fell on him.

December 22, John M. Thomas, Welsh, mason, at the Taylor shaft, Delaware, Lackawanna and Western Coal Company, was instantly killed by a fall of roof on the main haulage road in the New County



vein. Thomas with other men was called to clear a fall on the main road. They started to work before examining what was over them. The tail rope being in operation they could not hear any warning over head. Suddenly another fall came and caught Thomas. If they had stopped the tail rope before starting to work this accident might have been avoided.

### Explosion of Gas

November 13, William Bushing, American, driver, was fatally injured by an explosion of gas at the Central shaft, Delaware, Lackawanna and Western Coal Company. Bushing with other men was working on the night shift unloading rock for rock contractors, and about 2 A. M. while the men were putting a car on the track, the mule went into an abandoned gangway. Bushing went to get the mule, carrying a naked light. He came in contact with a body of gas that exploded and he was burned so seriously that he died November 16.

November 21, Benjamin G. Evans, Welsh, mine foreman, and Evan J. Williams, Welsh, fire boss, at the Central shaft, of the Delaware, Lackawanna and Western Coal Company, were instantly killed by an explosion of gas at about 3 o'clock. The two victims went into an abandoned part of the mine known as A gangway, Clark vein. They left the fire boss shanty at about 1:45 P. M. in search of a leakage in the ventilation, telling no one where they were going, or to what section of the mine. At about 3 P. M. an explosion was heard, but no one knew where it was. When the two men did not report at the office at the proper time, the night fire boss became alarmed and notified District Superintendent Thomas J. Williams and his assistant, David Lloyd, that the two men were missing. They immediately got a searching party together who started to work at 10:30 P. M. and continued all night. I was notified of the explosion at 6. A. M. and arrived at the mines at 7:30 A. M. with Superintendent R. A. Phillips. We at once started five other searching parties to work in different sections of the mines, and at about 4:30 P. M. November 22, the body of fire boss Evan J. Williams was found. The search was then continued for the body of mine foreman Evans which was found at 2 A. M. November 23, completely covered with gob which had been blown down by the explosion about fourteen feet from where the body of Williams was found. I ordered an inquest in this case which was held at the Court House, Scranton, December 5. The jury rendered the following verdict:

We, the jury, do find that Benjamin G. Evans, and Evan J. Williams came to their death by an explosion of gas caused by a naked light carried by mine foreman Evans coming in contact with a body of gas in the old workings of the Central mines of the Delaware, Lackawanna and Western Coal Company.

### Blasts

February 9, Michael Koies, Polish, laborer, at the Pyne shaft, was fatally injured in a chamber on 3rd Right off slope Clark vein. The miner was about to fire a blast and told Koies to go back the chamber road to stop anybody from coming up. He went back a

distance of 232 feet to another chamber and stood in the middle of the road. When the blast went off a piece of coal came back and struck him on the side of the head inflicting injuries from which he died the same day.

October 6, John G. Phillips, Welsh, miner, at the Sloan mines, was instantly killed. He was firing a hole for a fellow workman in the adjoining chamber, and the hole was in the bottom coal with nine inches of powder in it. The cross cut was only twenty feet away from the face. He lit the squib and before he reached the crosscut the blast exploded, and a piece of flying coal struck him on the side of the head, fracturing his skull.

November 13, George Jenkins, American, miner, at the Sloan Surface vein, was instantly killed. He had prepared three holes for blasting, and fired two of them and went back into the smoke to fire the third. This vein is of a damp nature and the smoke hangs in the places. The victim knew this and in my opinion after he fired the two holes he could not see what he was doing. I believe that he lit the squib instead of the match, as his lamp was found at the mouth of the hole, and his body was only three feet away completely covered with coal.

### Powder

January 19, John Hughes, American, miner, at the Bellevue mines, Oxford section, was fatally injured by an explosion of powder. There being no eye witness to the accident, I had to form my own opinion as to its cause. Upon examination of the place I found that Hughes had drilled a hole in the bottom rock, and gone back to the second cross cut where he had his box to prepare a charge of powder. He only had a half-keg of powder in his place, and according to my opinion, judging from the scene of the accident, he was in the act of making a cartridge with his lamp on his head and either a spark or his lamp fell into the powder causing the explosion. He died two hours later in the Medical room at foot of shaft.

### Falling Down Shaft

May 12, Anthony Woznock, Slavonian, miner, at the Dodge shaft, was instantly killed. Woznock was one of ten men being hoisted to the surface at about 2 P. M. and when near the surface vein he was seen to stagger and fall off the cage before any one could catch him. He fell a distance of 275 feet.

### Cars

February 17, Beo Stick, Italian, company laborer, outside, at Hampton Storage Plant, was instantly killed. His duty was the handling of coal in the unloading of cars. He, without the knowledge of the foreman, undertook to run a car down from the switch to the plant, which he was in no way considered competent to do. He did it entirely on his own responsibility, and in some unaccountable manner while applying the brake he slipped and fell on the track, the car passing over him.

March 26, John T. Jones, Welsh, fire boss, at the Dodge shaft, was instantly killed. He was going in to the Big vein on his second

tour of his district, and when he came to the passing branch on head of the plane, he was told by the runner to stand on the empty branch as he was going to run some loaded cars on to the loaded track. He stood on the empty track until the loaded trip was within about 15 feet away, then he stepped directly in front of the trip and was knocked down fracturing his skull and breaking his neck.

May 15, August Shaffer, German, motor man, at Bellevue shaft, was fatally injured. He was going down a heavy grade on G counter with a loaded car ahead of the motor. The rails were wet and the motor got away from him and bumped into a loaded trip which was standing on the level at foot of the hill. According to his statement while being treated at the Medical room at foot of shaft, he neglected to examine the sand pipes, and when he wanted sand it failed to work the pipes being blocked.

August 23, George Smigleski, Polish, company laborer, outside, at Greenwood, breaker, was fatally injured. He was employed to attend the foot of a culm plane, and while he was in the act of pushing a car into the foot another car came and caught him, squeezing him severely. He died next day.

### Machinery

August 4, William J. Phillips, American, brake man, at the Sloan shaft, was instantly killed by falling under electric motor on G gangway Clark vein. He attempted to get on the front end of the motor while it was in motion. His foot slipped and he fell underneath.

### Suffocation

March 27, George Barney, Polish, and George Isock, Polish, outside laborers, at the Dodge Breaker, of the Delaware, Lackawanna and Western Coal Company, were suffocated on the culm dump by coal gas, at about 11:15 P. M. These two men with five others were using water hose to put out fire on the dump. At 11 o'clock they went for lunch and then went back to work. At 11:45 P. M. the two victims were missing from their hose. They were found 45 feet away dead. They had gone to sleep and were suffocated by the coal gas rising from the fire. The Coroner's jury rendered a verdict of accidental death.

## CONDITION OF COLLIERIES

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Archbald Colliery.—The ventilation and drainage and general condition as to safety are good, excepting the Big vein where the ventilation will be improved by the air bridge now in course of construction.

Sloan Colliery.—General condition as to safety good.

Central Colliery.—General condition as to safety good.

Continental Colliery.—Drainage good, but the ventilation in the Rock vein and Clark vein pitch in poor condition, but the work is being pushed to put it in good condition.

Hampton Colliery.—Ventilation and drainage good.

Pyne Colliery.—General condition as to safety good.



Hyde Park Colliery.—Ventilation and drainage good, except a portion of the New County slope where the ventilation can be improved.

Dodge Colliery.—Ventilation and drainage fair.

Holden Colliery.—General condition as to safety good.

Taylor Colliery.—Ventilation and drainage are good in the Clark and New County veins, but poor in the Big and Rock veins.

Bellevue Colliery.—General condition as to safety good.

National Colliery.—Ventilation fair, drainage good.

#### PEOPLE'S COAL COMPANY

Oxford Colliery.—Ventilation good, drainage fair.

#### DELAWARE AND HUDSON COMPANY

Greenwood No. 1.—General condition good.

Greenwood No. 2.—Ventilation good, drainage fair.

#### SCRANTON COAL COMPANY

Capouse Colliery.—General condition as to safety good.

### IMPROVEMENTS

#### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pyne Colliery.—Completed July 9 the installation of an 18 x 10 x 12 inch underwriters' fire pump, capacity 1,000 gallons per minute and equal to 4 1-8 nozzle streams. Fire proof brick building for pump and hose cart. Also fire alarm signals installed in breaker. Erected a new Mine Hospital in a more convenient place inside.

Archbald Colliery.—One rock plane tunnel from New County vein to Big vein, west of shaft about 3,000 feet, 7 feet x 14 feet, pitch 10 degrees, length 280 feet. One rock plane tunnel from New County vein to Big vein, 2,000 feet southwest of shaft, 7 feet x 14 feet, pitch 10 degrees, length 315 feet. One rock tunnel from Rock vein to Diamond vein, 1,800 feet south of shaft, 7 feet x 14 feet, pitch 10 degrees, length 510 feet. One rock plane tunnel about 3,000 feet west of shaft, from Rock vein to Diamond vein, for second opening, 7 feet x 12 feet, pitch 10 degrees, length 230 feet.

Continental Colliery.—One rock plane tunnel from Rock vein to Diamond vein, 7 feet x 14 feet, pitch 10 degrees, length 200 feet.

Hyde Park Colliery.—A new washery annex was completed and put in operation April 23; capacity 600 tons per day. Installed in breaker 3 tandem 5-foot slate pickers. Took out the wood floor in breaker engine room and replaced it with concrete. Removed the old boilers and boiler-house on account of being too close to the breaker. This has improved the condition of this colliery very materially. In September the wood cribbing in the main shaft and the central air shaft was taken out and replaced with concrete and expanded metal. One rock plane tunnel from Rock vein to Diamond vein, 7 feet x 14 feet, pitch 10 degrees, length 200 feet. One rock tunnel from No. 2 Dunmore vein to Clark vein for return air and second opening, 7 feet x 12 feet, pitch 20 degrees, length 250 feet.

Hampton Colliery.—Idle since October 20 for extensive repairs on breaker. When completed the breaker will be almost entirely equipped with new machinery which includes 12 of the latest improved 5 foot tandem slate pickers. The wood cribbing in the shaft was taken out and replaced with concrete and expanded metal. A new fire proof mine Hospital and Foreman's office were also completed inside.

Sloan Colliery.—One rock tunnel was driven from the New County vein to the Big vein for return air.

Central Mines.—A new 8x6x24 foot diameter fan with steel casing on concrete foundation has been installed at this mine to replace the old 14 foot diameter belt-driven ventilating fan. Also a fire proof brick building for engine room. Class and size of engine: Corless Tandem, high pressure cylinder 14x36 inches; low pressure cylinder 22x36 inches, 84 horse-power. The engine is connected direct to the fan. The fan was connected to the mine May 26.

Central Boiler Plant.—Installed a modern 6,000 horse-power open Cochrane water heater and a new fire proof brick building for water feed pumps, store room and Foreman's office.

### Electrical Machinery Installed

Pyne Colliery.—One 10 ton electric motor on west gangway Clark vein. One 1,000 gallon electric centrifugal pump at foot of slope in Clark vein; induction motor, alternating current 400 volts. One 450 gallon electric centrifugal pump in west side dip; induction motor; alternating current 400 volts. Power is taken to these pumps from the surface through bore holes.

Archbald Colliery.—One 6½ ton electric motor in the Big vein.

Continental Colliery.—One 100 horse-power electric motor hoist on Dunmore slope; induction motor; alternating current 400 volts.

Hyde Park Colliery.—One 100 horse-power electric hoist on Dunmore slope; induction motor; alternating current 400 volts.

Sloan Colliery.—One 5½ ton electric motor in surface vein.

Central Water Shaft.—Installed during the year at the foot of the shaft in the Clark vein, an 800 horse-power six-stage electric centrifugal pump. Capacity 5,000 gallons per minute; alternating current; 3 phase; 2,100 volts. Column pipe 16 inch diameter. Lift 480 feet. This pump was put in operation the latter part of December, and to date is apparently working satisfactory. This pump is used in connection with the automatic bucket water hoist that was installed and commenced operation in August 1905.

Bellevue Colliery.—Grading and cutting rock at foot of Main shaft No. 2 Dunmore vein to improve the foot. Installed electric hoist in No. 2 Dunmore vein to operate No. 2 slope. Installed electric motor on V gangway Clark vein. Installed electric motor in New County vein. Rock cut in New County vein to take Big vein coal to New County vein. Tore down old boiler house. Installed new middle rolls in breaker. New water line reservoir to pump house. Erected new brick office for foremen, also new brick pump room. Erected a new brick oil house.

Dodge Colliery.—Installed 3 electric motors, one in Diamond vein, and two in New County vein. Tore down old boiler house.



Taylor Colliery.—General repairs in breaker and bracing tower. Installed electric lights in breaker and buildings. Concreted and timbered pump shaft. New brick hoisting house. New supply engine house. New brick and concrete oil house. New water line for fire purposes.

Holden Colliery.—General breaker improvements. New set bony rolls. Braced breaker tower. New brick fire pump house and mine foreman's office. Fuel conveyor line from breaker to boiler plant.

National Colliery.—Installed new scales for light and loaded tracks. Concreted main shaft. Erected new scale house and office. New washery annex. Now in course of construction new boiler house and heater and pumps.

#### DELAWARE AND HUDSON COMPANY

Greenwood Colliery.—No. 1 slope in No. 2 Dunmore vein driven 375 feet.

#### SCRANTON COAL COMPANY

Capouse Colliery.—Sunk main shaft from Clark vein to bottom vein, distance 194 feet. Sunk No. 2 shaft from Clark vein to bottom vein, distance 194 feet. A water level tunnel was driven on west side of shaft from Clark vein to Dunmore vein, distance 794 feet.



## Fifth District

LACKAWANNA, LUZERNE AND SULLIVAN COUNTIES

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Scranton, Pa., February 26, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting my report as Inspector of Mines for the Fifth Anthracite District for the year 1906, as provided in the Act of 1903.

I desire respectfully to call your attention to the general remarks embodied in this report, which will explain why a number of the Mines in this District were idle during the year, thereby reducing the tonnage to a figure much lower than it would have been under normal conditions.

Respectfully submitted,

H. D. JOHNSON,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	22
Number of mines, .....	48
Number of mines in operation, .....	46
Number of tons of coal shipped to market, .....	2,517,481
Number of tons used at mines for steam and heat, .....	199,568
Number of tons sold to local trade and used by employes, .....	44,525
Number of tons produced, .....	2,761,574
Number of tons produced by electrical machines, .....	178,754
Number of persons employed inside of mines, .....	6,855
Number of persons employed outside, .....	2,546
Number of fatal accidents inside of mines, .....	29
Number of fatal accidents outside, .....	5
Number of non-fatal accidents inside of mines, .....	51
Number of non-fatal accidents outside, .....	11
Number of tons of coal produced per fatal accident inside, ..	95,226
Number of persons employed per fatal accident inside, ..	236
Number of persons employed per fatal accident outside, ..	509
Number of persons employed per non-fatal accident inside, .....	134
Number of persons employed per non-fatal accident outside, .....	231
Number of wives made widows, .....	20
Number of children orphaned, .....	47
Number of steam locomotives used inside of mines, .....	1
Number of steam locomotives used outside, .....	17
Number of compressed air locomotives used outside, ..	4
Number of electric motors used inside, .....	8
Number of fans in use, .....	30
Number of furnaces in use, .....	2
Number of gaseous mines in operation, .....	23
Number of non-gaseous mines in operation, .....	23
Number of new mines opened, .....	3

## TABLE A

## Production of Coal

Names of Operators	Tons
Pennsylvania Coal Company, .....	1,034,631
Lehigh Valley Coal Company, .....	606,565
Hillside Coal and Iron Company, .....	209,258
Connell Anthracite Mining Company, .....	178,754
Hudson Coal Company, .....	168,597
Jermyn and Company, .....	157,614
Northern Anthracite Coal Company, .....	105,521
Elliott, McClure and Company, .....	88,655
Austin Coal Company, .....	61,664
Robertson and Law, .....	59,638
Brookside Coal Company, .....	37,909
O'Boyle-Foy Anthracite Coal Company, .....	25,900
Reliance Coal Company, .....	16,840
Randall and Schaad Brothers, .....	10,028
Total, .....	<u>2,761,574</u>

## Production by Counties

Lackawanna, .....	1,240,839
Luzerne, .....	1,200,532
Sullivan, .....	320,203
Total, .....	<u>2,761,574</u>



TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Pennsylvania Coal Co.*	12	2	15	12	1	13	79,587	86,219	2,282	753	3,055	176	377	190	753
Lehigh Valley Coal Co.,	5	.....	5	20	5	25	121,313	30,328	1,044	429	1,473	268	.....	52	86
Hillside Coal and Iron Co.,	5	.....	5	2	.....	25	104,629	104,629	418	129	547	269	.....	209	.....
Connell Anthracite Mining Co.,	2	.....	2	2	.....	2	89,377	89,377	193	118	311	97	.....	97	.....
Hudson Coal Co.,	2	.....	2	9	.....	11	84,248	18,733	499	297	706	250	.....	55	104
Jermyn and Co.,	3	.....	3	3	.....	4	52,538	52,538	1,331	407	1,738	444	.....	444	407
Elliott, McClure and Co.,	1	1	2	3	.....	2	88,655	41,323	485	180	665	485	180	243	.....
Reliance Coal Co.,	1	.....	1	1	.....	2	16,840	16,840	84	35	117	84	.....	84	.....
D., L. and W. R. Co.,†	.....	2	2	1	.....	2	.....	.....	70	43	113	21	.....	.....	31
Miscellaneous companies,	.....	.....	.....	.....	.....	.....	.....	.....	449	241	696	.....	.....	.....	.....
Totals and averages for district,	29	5	34	51	11	62	95,226	51,148	6,855	2,546	9,401	236	509	134	281

\*Hollister and Bowman operated the Avoca colliery until May, and had two non-fatal accidents, which are charged to the Pennsylvania Coal Company, which purchased and operated the colliery from June, and reported the tonnage for the year.

†Not mining coal at the Hallstead colliery, but making extensive repairs. Expect to resume operation in 1907.

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....			1		1	1				1			3	10.34
Falls of slate, .....	1		1				1			1			5	17.24
Falls of roof, .....		1	1		2	1	1	1	2	2	2	1	15	51.72
Mine cars, .....						1	1	1					2	6.90
Suffocation by gas, etc., .....								1					1	3.45
Explosions of powder and dynamite, .....			1										1	3.45
Premature blasts, .....	1												1	3.45
Falling into shafts, .....										1			1	3.45
Totals, .....	4	1	4		3	3	2	3	2	4	2	1	29	100.00
Causes of Accidents Outside														
Machinery, .....									1				1	20.00
Suffocation in chutes, etc., .....												1	1	20.00
Miscellaneous, .....							1				1	1	3	60.00
Totals, .....						1		1			1	2	5	100.00
Grand totals inside and outside, .....	4	1	4		3	3	3	3	3	4	3	3	34	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....		1			1							1	2	3.92
Falls of slate, .....						1						1	2	3.92
Falls of roof, .....	1	4	3							3			15	29.41
Mine cars, .....	3	3	3		1		1		1	1	1		14	27.45
Explosions of gas and dust, .....		4	1					1		2			8	15.69
Explosions of powder and dynamite, .....	1												1	1.96
Premature blasts, .....	3				2						2		7	13.73
Machinery, .....					1								1	1.96
Miscellaneous, .....					1			1					1	1.96
Totals, .....	8	12	7		5	2	1	2	3	6	3	2	51	100.00
Causes of Accidents Outside														
Cars, .....			2			1			1	2	1		7	63.63
Machinery, .....											1		1	9.09
Miscellaneous, .....										1		2	3	27.28
Totals, .....			2			1			1	3	2	2	11	100.00
Grand totals inside and outside, .....	8	12	9		5	3	1	2	4	9	5	4	62	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, .....										1			1
Miners, .....	3		1		2		1	3	1	1	1	1	14
Miners' laborers, .....		1	3		1	1			1	2			10
Drivers and runners, .....							1						1
Doorboys and helpers, .....						1							1
Company men, .....	1												1
All other employes, .....						1							1
Totals, .....	4	1	4		3	3	2	3	2	4	2	1	29
Outside													
Blacksmiths and carpenters, .....							1				1	1	3
Engineers and firemen, .....									1				1
All other employes, .....											1		1
Totals, .....							1		1		1	2	5
Grand totals inside and outside, ....	4	1	4		3	3	3	3	3	4	3	3	34

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	1	5	4	1	1	1	1	1	1	1	1	1	19
Miners' laborers, .....	3	5	1	1	1	1	1	1	1	1	1	1	17
Drivers and runners, .....	3	1	1	1	1	1	1	1	1	1	1	1	10
Company men, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	4
Totals, .....	8	12	7	5	5	2	1	2	3	6	3	2	51
Outside													
Blacksmiths and carpenters, .....	1	1	1	1	1	1	1	1	1	1	1	1	1
Slatepickers (boys), .....	1	1	1	1	1	1	1	1	1	1	1	1	2
All other employes, .....	1	1	1	1	1	1	1	1	1	1	1	1	8
Totals, .....	2	2	2	2	2	1	1	1	3	3	2	2	11
Grand totals inside and outside, ....	8	12	9	5	5	3	1	2	4	9	5	4	62

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	..	..	..	..	2	2	1	2	1	1	1	11
Welsh, .....	1	..	..	..	..	..	..	1	..	..	..	..	2
Irish, .....	1	..	..	..	..	..	..	..	..	..	..	1	1
Polish, .....	2	..	3	..	1	..	1	..	2	..	2	1	12
Italian, .....	..	1	1	..	2	1	..	1	..	1	..	..	6
Austrian, .....	..	..	..	..	..	..	..	..	1	..	..	..	1
Russian, .....	..	1	..	..	..	..	..	..	..	..	..	..	1
Totals, .....	4	1	4	..	3	3	3	3	3	4	3	3	34

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	1	4	..	2	..	1	..	2	4	1	..	16
English, .....	..	1	..	..	..	..	1	..	..	..	1	..	1
Welsh, .....	..	..	..	..	1	1	..	..	..	..	..	..	1
Scotch, .....	..	..	..	..	1	1	..	..	..	..	..	..	2
Irish, .....	2	..	1	..	..	..	..	..	..	..	..	1	4
German, .....	1	1	..	..	..	..	..	..	..	..	..	..	2
Polish, .....	3	4	4	..	1	1	..	2	1	1	..	2	19
Italian, .....	..	..	..	..	1	..	..	..	..	2	1	1	5
Slavonian, .....	..	1	..	..	..	..	..	..	..	1	..	..	2
Lithuanian, .....	..	4	..	..	..	1	..	..	1	1	1	..	8
Austrian, .....	..	..	..	..	..	..	..	..	..	..	1	..	1
Russian, .....	1	..	..	..	..	..	..	..	..	..	..	..	1
Totals, .....	8	12	9	..	5	3	1	2	4	9	5	4	62

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
<b>Pennsylvania Coal Co.</b>																	
Old Forge No. 1, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	5	4	52	.9	Guibal, ..	Steam, ..	...	7	100,910	85,530	114,520	164	521
Old Forge No. 1, .....	Slope, .....	Gaseous, .....	Fan, .....	17	4.5	4.5	50	.5	Guibal, ..	Steam, ..	...	6	57,965	51,745	59,650	131	295
Old Forge No. 2, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	5	5	64	.6	Guibal, ..	Steam, ..	...	6	91,330	84,455	120,455	271	311
Mountain Clark, .....	Drift, .....	Non-gas, .....	Furnace, ..	...	...	...	...	...	...	...	...	1	14,150	21,600	21,600	28	771
Mountain Marcy, .....	Drift, .....	Non-gas, .....	Furnace, ..	...	...	...	...	...	...	...	...	1	13,000	11,960	11,960	50	239
Central No. 13, .....	Drift, .....	Gaseous, .....	Fan, .....	20	6.6	5.0	60	.6	Guibal, ..	Steam, ..	...	3	78,000	69,800	89,000	106	844
Central Laws, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	6.6	5.0	60	.1	Guibal, ..	Steam, ..	...	3	87,700	83,300	112,210	210	302
Central Clark, .....	Slope, .....	Gaseous, .....	Fan, .....	20	6.6	5.0	60	.1	Guibal, ..	Steam, ..	...	3	13,200	13,200	14,210	16	703
Rarum Nos. 1 and 2, .....	Shafts, .....	Gaseous, .....	Fan, .....	20	6.6	5.0	60	.1	Guibal, ..	Steam, ..	...	3	55,310	48,890	49,210	48	113
Larnum No. 3, .....	Shaft, .....	Gaseous, .....	Fan, .....	15	4.9	3.9	67	.5	Guibal, ..	Steam, ..	...	3	60,800	54,800	62,500	100	315
Avoca, .....	Shaft, .....	Non-gas, .....	Fan, .....	...	...	...	...	...	Guibal, ..	Steam, ..	...	5	49,800	46,570	52,500	115	374
Avoca, .....	Drift, .....	Non-gas, .....	Fan, .....	12	4	4	115	.5	Guibal, ..	Steam, ..	...	1	14,300	12,000	33,000	24	504
<b>Lehigh Valley Coal Co.</b>																	
William A., .....	Shaft, .....	Gaseous, .....	Fan, .....	18	5	5	75	.6	Guibal, ..	Steam, ..	...	6	100,380	87,790	100,790	219	449
Lawrence shaft and drifts, .....	Shaft, .....	Gaseous, .....	Fan, .....	18	5	5	65	1			...	4	61,900	58,400	63,700	112	521
Radylon, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	6.5	6	75	1			...	3	46,400	42,900	49,500	106	465
Radylon, .....	Slope, .....	Non-gas, .....	Fan, .....	12	4	4	75	1	Guibal, ..	Steam, ..	...	3	29,200	27,800	30,600	34	312
<b>Seneca Colliery:</b>																	
Twin, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	5.6	5.6	70	1.2	Guibal, ..	Steam, ..	...	4	64,400	52,000	76,000	72	702
Coxey, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	5	5	68	.9			...	5	69,500	54,500	74,600	27	2,097
Pittston, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	5	5	32	1			...	3	34,900	19,200	35,900	19	1,339
Columbia, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	5.6	5.6	70	1.2			...	3	38,200	35,300	41,100	108	387



Locality.	Kind of fuel.	Power, H.P.	Speed, R.P.M.	Stroke, inches.	Weight, tons.	Year built.	Remarks.
Hillside Coal and Iron Co. 'Consolidated, 'Consolidated,	Slope, Shaft,	14 12	4 4	1 4	100 80	8 8	Guibal, .. Guibal, ..
Connell Anthracite Mining Co. 'Connell,	Non-gas, Non-gas,	16 16	4 4	4 4	60 60	2 2	Guibal, .. Guibal, ..
Hudson Coal Co. Langcliff, No. 1, No. 2, No. 3, No. 4, Spring Brook No. 1, Spring Brook No. 2, Spring Brook No. 2,	Non-gas, Non-gas, Non-gas, Non-gas, Non-gas, Non-gas, Non-gas,	17 17 12 15	5 5 4 3	6 6 4 3.5	60 60 90 120	2 2 2 2	Guibal, .. Guibal, .. Guibal, .. Guibal, ..
Jermyn and Co. Jermyn No. 1 (slope and shaft), Jermyn No. 2, Jermyn No. 3, Jermyn No. 2,	Gaseous, Gaseous, Gaseous, Non-gas,	14 13 13 16	4.5 4.25 4.5 4	4 4 4 4	90 90 90 110	1.1 1 1 1	Guibal, .. Guibal, .. Guibal, .. Guibal, ..
Northern Anthracite Coal Co. Murray, Elliott, McClure and Co. Sibley,	Non-gas, Non-gas, Gaseous, Gaseous,	16 16	5 4	6 4	65 110	1.3 1	Guibal, .. Guibal, ..
Austin Coal Co. Austin, Robertson and Law Katydid (Victor), O'Boyle-Foy Anthracite Coal Co. O'Boyle and Foy,	Tunnel, Non-gas, Non-gas, Non-gas, Non-gas,	..... ..... 12 13	..... ..... 3.6 6	..... ..... 3 6	..... ..... 70 40	..... ..... 4 1.5	..... ..... Guibal, .. Guibal, ..
Reliance Coal Co. Reliance, Randall and Schaad Brothers Randall and Schaad,	Non-gas, Non-gas, Non-gas, Non-gas,	13 13 17	4.6 4.6 5	4.6 4.6 5	55 55 5	4 4	Guibal, .. Guibal, .. Open, Guibal, ..
D. L. and W. R. R. Co. Halsstead * Feeder Dam *	Non-gas, Gaseous, Gaseous,	..... 17 17	..... 5 5	..... 5 5	..... ..... .....	..... ..... .....	..... Steam Guibal, ..

\*Not operating at present, but are cleaning up and restoring ventilation, with that end in view.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co. Old Forge, ..... Central, ..... Barnum, ..... Avoca, .....	Lackawanna, .. Luzerne, .....	{ William A. May, } Gen. Manager, } { W. W. Inglis, } Gen. Supt. }	Scranton, .....	{ Joseph P. Jennings, } William P. Jennings, }	Moosic, ..... Pittston, .....	Erie
Lehigh Valley Coal Co. William A, ..... Lawrence, ..... Seneca, ..... Babylon, .....	Lackawanna, .. Luzerne, .....	{ S. D. Warriner, } Gen. Manager, }	Wilkes-Barre, .....	W. D. Owens, ....	Pittston, .....	Lehigh Valley
Hillside Coal and Iron Co. 'Consolidated, .....	Luzerne, .....	V. L. Peterson, ...	Scranton, .....	E. D. Caryl, .....	Pittston, .....	N. Y. S. and W.
'Connell Anthracite Mining Co. 'Connell, .....	Sullivan, .....	W. L. Connell, ....	Scranton, .....			Lehigh Valley
Hudson Coal Co. Spring Brook, ..... Langcliff, .....	Lackawanna, .. Luzerne, .....	{ C. C. Rose, ..... }	Scranton, .....	John Lovering, ...	Greenwood, .....	Delaware and Hudson
Jermyn and Co. Jermyn Nos. 1 and 3, ..... Jermyn No. 2, .....	Lackawanna, ..	J. J. Jermyn, .....	Scranton, .....	J. P. Corcoran, ...	Rendham, .....	N. Y. S. and W.
Northern Anthracite Coal Co. Murray, .....	Sullivan, .....	M. J. Murray, ....	Dunmore, .....	P. J. Murray, ....	Lopez, .....	Lehigh Valley
Elliott, McClure and Co. Sibley, .....	Lackawanna, ..	R. W. Reese, .....	Scranton, .....			D., L. and W. and Lehigh Valley
Austin Coal Co. Austin tunnel, .....	Lackawanna, ..	W. G. Robertson, ...	Scranton, .....	John J. Cosgrove, ..	Old Forge, .....	Lehigh Valley
Robertson and Law Katydid, .....	Lackawanna, ..	John M. Robertson, ..	Moosic, .....			Erie
Brookside Coal Co. Brookside washery, .....	Lackawanna, ..	M. F. Dolphin, ...	Scranton, .....	Wm. Dougherty, ...	Moosic, .....	N. Y. S. and W.
Reliance Coal Co. Reliance, .....	Luzerne, .....	Theo. A. Hogan, ...	Pittston, .....			Lehigh Valley

Randall and Schaad Brothers	Sullivan, .....	William J. Schaad, .....	Mildred, .....	.....	.....	Lehigh Valley
Randall and Schaad, .....	Sullivan, .....	M. W. O'Boyle, ...	Pittston, .....	.....	.....	Lehigh Valley
O'Boyle-Foy Anthracite Coal Co.	Sullivan, .....	R. A. Phillips, ....	Scranton, .....	E. J. Evans, .....	Murray, .....	D., L. and W.
O'Boyle and Foy, .....	Luzerne, .....				Scranton, .....	
D., L. and W. R. Co.						
Hallstead, .....						



Hillside Coal and Iron Co. Consolidated colliery. Consolidated washery,	} Luzerne.....		182,800 14,341	9,668	2,449	194,917 14,341	204 47	536 11	2 2	8,297	6,826 60
Totals,			197,141	9,668	2,449	209,258		547	2	8,297	6,826 60
Connell Anthracite Mining Co. Sullivan.....			158,800	18,250	1,704	178,754	216	311	2	1,458	24,078 8
Hudson Coal Co. Langeliff..... Spring Brook..... Lackawanna.....			91,598 53,108	13,175 8,421	1,261 949	106,034 62,563	121 122	391 315	5 6	4,970 4,882	1,745 10,640 28
Totals,			144,791	21,596	2,210	168,597		706	2	9,852	12,385 96
Jermyn and Co. Jermyn Nos. 1 and 3, Jermyn No. 2, Lackawanna,			86,174 37,424	6,530 4,599	1,661 1,225	94,365 63,249	72 65	862 876	3 2	6,766 3,925	3,400 4,500 39
Totals,			143,598	11,129	2,887	157,614		1,738	3	10,691	7,900 70
Northern Anthracite Coal Co. Sullivan.....			98,756	5,415	1,350	105,521	134	161		3,404	750 24
Elliott, McClure and Co. Lackawanna.....			72,694	14,000	1,961	88,655	84	665	2	4,903	3,225 45
Sibley, Austin tunnel, Austin Coal Co. Lackawanna.....			50,181	7,000	4,483	61,664	159	218		2,109	363 12
Robertson and Law Lackawanna.....			52,895	4,500	2,243	59,638	271	113		960	13,517 16
Brookside Coal Co. Brookside washery, Lackawanna.....			34,094	2,600	1,215	37,909	248	43			
O'Boyle-Fox Anthracite Coal Co. Sullivan.....			22,455	3,160	285	25,900	118	130		1,400	200 13
Reliance Coal Co. Luzerne.....			9,365	3,650	3,555	16,840	197	117	1	560	4,850 14
Randall and Schaad Brothers Sullivan.....			7,819	1,000	1,209	10,028	198	32		700	
D. L. and W. R. R. Co. Halstead, Luzerne.....			*					113	2	4	3,835 10
Grand totals,			2,517,481	199,568	44,525	2,761,574		5,401	24	110,016	182,262 876

\*Making repairs. Will resume operations in 1907.





TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Steam	Air	Electric							
Pennsylvania Coal Co., .....	Lackawanna and Luzerne, .....	2	60	28	4,984	5,044	8	.....	82	3,635	15	15,621	7,283	.....	1
Lehigh Valley Coal Co., .....	Lackawanna and Luzerne, .....	.....	.....	23	4,500	4,500	3	3	66	3,650	12	9,900	9,100	2	1
Hillside Coal and Iron Co., .....	Luzerne, .....	14	280	4	320	660	3	.....	17	750	1	490	465	.....	1
Connell Anthracite Mining Co., .....	Sullivan, .....	.....	.....	5	1,050	1,050	.....	5	10	825	1	175	100	2	.....
Hudson Coal Co., .....	Lackawanna and Luzerne, .....	9	270	7	680	950	2	.....	32	1,205	3	2,300	800	.....	1
Jermyn and Co., .....	Lackawanna, .....	15	300	7	1,050	1,350	.....	.....	20	1,815	.....	3,500	1,900	.....	.....
Northern Anthracite Coal Co., .....	Sullivan, .....	.....	.....	4	400	400	.....	.....	7	400	.....	3,385	1,200	.....	.....
Elliott, McClure and Co., .....	Lackawanna, .....	.....	.....	8	1,350	1,350	.....	.....	15	970	1	2,500	1,200	.....	1
Roberts and Co., .....	Lackawanna, .....	7	140	3	335	465	1	.....	9	245	.....	450	250	1	.....
Boyle and Co., .....	Lackawanna, .....	.....	.....	6	380	460	.....	.....	9	245	3	450	250	.....	.....
O'Boyle-Fox Anthracite Coal Co., .....	Lackawanna, .....	.....	.....	4	400	400	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reliance Coal Co., .....	Sullivan, .....	.....	.....	3	350	350	.....	.....	.....	.....	.....	.....	.....	.....	.....
Randall and Schaad Brothers, .....	Luzerne, .....	.....	.....	2	275	275	.....	.....	3	370	1	60	40	.....	.....
D., L. and W. R. R. Co., .....	Sullivan, .....	.....	.....	.....	80	80	.....	.....	1	80	.....	480	240	.....	.....
Totals, .....	Luzerne, .....	70	1,510	109	16,614	18,124	18	4	8	14,171	50	49,311	25,768	5	7





TABLE 3.—Recapitulation

Names of Operators	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Enginemen and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Pennsylvania Coal Co.,	{ Lackawanna, Luzerne, }	8	6	7	802	733	359	66	8	186	107	2,282	....	4	50	59	232	86	13	309	753	3,035
Lehigh Valley Coal Co.,	{ Lackawanna, Luzerne, }	4	5	9	427	228	156	30	20	165	....	1,044	....	3	29	35	88	20	9	245	429	1,473
Hillside Coal and Iron Co.,	{ Luzerne, Sullivan, }	2	1	....	175	129	64	5	1	20	22	418	....	1	8	11	31	4	4	72	129	547
Connell Anthracite Mining Co.,	{ Sullivan, Lackawanna, }	1	1	....	77	52	....	4	7	9	42	193	1	1	7	12	37	3	3	54	118	311
Hudson Coal Co.,	{ Luzerne, Lackawanna, }	2	1	3	193	178	67	14	4	22	15	499	....	2	10	20	47	27	4	97	207	706
Jernyn and Co.,	{ Luzerne, Sullivan, }	1	....	9	522	435	145	24	5	169	....	1,331	3	2	11	21	186	47	5	132	407	1,738
Northern Anthracite Coal Co.,	{ Sullivan, Lackawanna, }	1	1	....	43	43	11	3	2	4	2	109	1	2	5	6	17	15	3	16	52	361
Elliott, McElure and Co.,	{ Lackawanna, Luzerne, }	1	1	2	3	159	155	69	10	3	83	....	485	1	1	8	107	18	2	38	180	665
Miscellaneous companies,	{ Lackawanna, Luzerne, }	6	3	2	161	153	39	7	10	68	45	494	6	5	19	46	53	17	8	117	271	765
Totals,	.....	27	18	33	2,559	2,126	910	163	60	726	233	6,855	12	21	141	218	798	227	49	1,080	2,546	9,401



TABLE 3. —PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Pennsylvania Coal Co.														
Old Forge, .....	Lackawanna, .....	18	13	20	.....	8	25	21	16	15	21	20	18	195
Central, .....	Luzerne, .....	14	13	17	.....	.....	.....	.....	.....	.....	22	.....	.....	44
Barnum, .....	Luzerne, .....	20	14	18	6	10	23	20	14	17	22	22	19	265
Avoca, .....	Luzerne, .....	*12	*10	*14	*	*3	7	10	10	10	10	13	11	112
Lehigh Valley Coal Co.														
Seneca, .....	Luzerne, .....	20	17	17	.....	8	18	16	19	17	18	18	20	188
William A. ....	Lackawanna, .....	17	16	16	.....	9	19	16	18	15	14	14	13	167
Lawrence, .....	Lackawanna, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Babylon, .....	Luzerne, .....	17	13	17	.....	7	16	15	16	14	14	10	15	154
Hillside Coal and Iron Co.														
Consolidated colliery, .....	Luzerne, .....	17	16	24	3	15	23	19	15	11	22	20	19	204
Connell Anthracite Mining Co.														
Connell, .....	Sullivan, .....	20	12	14	23	24	14	16	15	15	18	22	23	216
Hudson Coal Co.														
Spring Brook, .....	Lackawanna, .....	13	12	15	.....	6	14	13	12	8	9	11	9	122
Langcliff, .....	Luzerne, .....	12	9	13	.....	5	13	14	12	9	10	12	12	121
Jermyn and Co.														
Jermyn Nos. 1 and 3, .....	Lackawanna, .....	19	5	.....	.....	.....	.....	.....	7	21	20	.....	.....	72
Jermyn No. 2, .....	Lackawanna, .....	17	6	.....	.....	.....	.....	.....	.....	.....	.....	19	23	65
Northern Anthracite Coal Co.														
Murray, .....	Sullivan, .....	13	10	12	22	13	5	4	8	7	13	11	16	124
Elliott, McClure and Co.														
Sibley, .....	Lackawanna, .....	29	17	21	.....	10	16	.....	.....	.....	.....	.....	.....	84
Austin Coal Co.														
Austin tunnel, .....	Lackawanna, .....	14	15	20	.....	6	16	17	14	13	14	15	15	159

\*Operated by Hollister and Bowman.



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	Eddie Conesky,	Polish,	Miner,	28	S.	1	1	Jermyn No. 1,	Lackawanna,	Head and face crushed by fall of rock.
16	John McLaughlin,	Irish,	Miner,	40	S.	1	1	Seneca,	Luzerne,	Injured internally by fall of roof.
26	Andrew Kelley,	American,	Trackman,	27	W.	1	1	Old Forge No. 1,	Lackawanna,	Fractured spine and ribs by fall of roof.
31	Charles Smith,	Polish,	Miner,	30	M.	1	1	Barnum No. 2,	Luzerne,	Fractured skull by premature blast.
Feb.	John Seemonovich,	Russian,	Laborer,	40	M.	1	2	William A.,	Luzerne,	Killed by fall of rock.
March	Joseph Casper,	Polish,	Laborer,	36	M.	1	5	Barnum No. 3,	Luzerne,	Killed instantly by fall of rock.
1	Rogl Fassenucci,	Italian,	Miner,	23	S.	1	1	Old Forge No. 1,	Lackawanna,	Amputation of left hand, compound fracture of right arm, cut about face by premature explosion.
5	Frank Makorki,	Polish,	Laborer,	25	M.	1	1	Barnum No. 3,	Luzerne,	Killed instantly by fall of top coal.
9	Simon Brass,	Polish,	Laborer,	40	M.	1	3	Central Law shaft,	Luzerne,	Killed instantly by fall of rock.
May	Mike Frank,	Italian,	Miner,	45	M.	1	4	Shibley,	Lackawanna,	Killed instantly by fall of top coal.
23	Mike Scariato,	Polish,	Miner,	38	M.	1	1	Old Forge No. 1,	Luzerne,	Killed instantly by fall of rock.
25	Frank Tankoski,	Polish,	Laborer,	28	M.	1	9	Barnum No. 2,	Luzerne,	Leg badly lacerated by fall of rock.
26	George Hatton,	American,	Doorboy,	18	S.	1	1	Cornell,	Sullivan,	Leg badly lacerated by cars. Leg was amputated and injuries proved fatal.
June	Lucatoni Jondalito,	Italian,	Laborer,	19	S.	1	1	William A.,	Lackawanna,	Internal injuries, fracture of pelvis, rupture of bladder, by fall of roof.
5	Joel Saxton,	American,	Mac. helper,	53	M.	1	1	Connell,	Sullivan,	Legs and left arm crushed and injured internally by fall of top coal.
July	Joseph Stull,	American,	Driver,	18	S.	1	1	Babylon,	Luzerne,	Fractured skull by fall of rock.
16	John Vescavage,	Polish,	Miner,	23	S.	1	1	Seneca,	Luzerne,	Injured internally by fall of rock.
23	John Evans,	American,	Carpenter,	19	S.	1	1	Hallstead,	Luzerne,	Skull fractured by fall from breaker.
Aug.	Edward Barlow,	American,	Miner,	39	M.	1	2	Barnum No. 3,	Luzerne,	Killed instantly by fall of roof.
7	Anthony Montong,	Italian,	Miner,	27	M.	1	1	Barnum No. 3,	Luzerne,	Two ribs and collar bone broken and injured internally between car and prop.
Sept.	David Aston,	Welsh,	Miner,	45	M.	1	5	Spring Brook,	Lackawanna,	Asphyxiated by powder fumes.
10	Benjamin Kilmer,	American,	Laborer,	44	M.	1	1	Spring Brook,	Lackawanna,	Pack broken by fall of rock.
12	Luery Prosek,	Austrian,	Miner,	28	S.	1	1	Consolidated shaft,	Luzerne,	Killed instantly by fall of rock.
17	John Moiffatt,	American,	Engineer,	53	M.	1	1	Barnum No. 1,	Luzerne,	Fractured skull by engine breaking. Out-side.
Oct.	Jeremiah Mooney,	American,	Fire boss,	60	M.	1	1	Reliance,	Luzerne,	Fractured skull, concussion of brain, by falling from bucket in shaft.
6	Jake O'Shall,	Polish,	Laborer,	27	S.	1	1	Jermyn No. 1,	Lackawanna,	Head and breast injured by fall of rock.
11	Reuben Casseroli,	Italian,	Laborer,	26	M.	1	2	Jermyn No. 1,	Lackawanna,	Killed by fall of rock.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. Nov.	23 Steven Pudis, .....	Polish, .....	Miner, .....	30	S.	1	1	Barnum No. 2, ....	Luzerne, .....	Instantly killed by fall of rock.
	20 S. B. Elliott, .....	American, .....	Carpenter, .....	53	M.	1	1	Sibley, .....	Lackawanna, ....	Instantly killed by fall from breaker.
	22 Jacob Roth, .....	Polish, .....	Laborer, .....	46	M.	1	4	Consolidated slope, .....	Luzerne, .....	Neck broken by fall of rock.
Dec.	22 Joseph James, .....	Polish, .....	Miner, .....	30	M.	1	3	Barnum No. 3, ....	Luzerne, .....	Fatally injured by fall of rock.
	1 Henry Basham, .....	American, .....	Carpenter, .....	21	S.	1	1	Hallstead, .....	Luzerne, .....	Fractured skull by fall from frame work.
	7 Michael Quinn, .....	Irish, .....	Miner, .....	45	M.	1	3	Old Forge No. 2, ..	Lackawanna, ....	Outside.
20	Peter Brondish, .....	Polish, .....	Laborer, .....	20	S.	1	1	Avoca, .....	Luzerne, .....	Asphyxiated by sulphur fumes. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Anthony Galanis, .....	Russian, .....	Laborer, .....	23	S.	Babylon, .....	Luzerne, .....	Leg broken by fall of rock.
10	Joseph Condon, .....	Irish, .....	Runner, .....	27	S.	William A. ....	Lackawanna, .....	Two ribs broken by being crushed between car and rib.
12	Anthony Kwatkowski, .....	Polish, .....	Driver, .....	20	S.	Babylon, .....	Luzerne, .....	Shoulder dislocated and collar bone and three ribs broken by stumbling in front of a moving car.
16	Stanley Rescavage, ..	Polish, .....	Laborer, .....	24	S.	Seneca, .....	Luzerne, .....	Slightly cut on face and hands by premature blast that he fired in miner's absence.
20	Alexander Sincick, ...	German, .....	Laborer, .....	40	M.	Old Forge No. 1 shaft, .....	Lackawanna, .....	Arm fractured, leg bruised and head cut by premature blast that he fired in miner's absence.
25	George Glinkensky, ...	Polish, .....	Miner, .....	40	M.	Jermyn No. 1, ....	Lackawanna, .....	Arm and face burned. A spark ignited powder that he was handling.
27	Joseph Walsh, .....	American, .....	Driver, .....	16	S.	Spring Brook, ....	Lackawanna, .....	Compound fracture of left leg, shoulders and arm broken by falling from the bumper under the car.
31	John O'Rourke, .....	Irish, .....	Company man, ...	40	M.	Old Forge, .....	Lackawanna, .....	Leg broken by coal flying from a shot.
Feb. 8	Richard Bevans, .....	Welsh, .....	Miner, .....	42	M.	Jermyn No. 3, ....	Lackawanna, .....	Leg broken by fall of coal.
8	Frank Dunobrowski, ...	Polish, .....	Laborer, .....	24	S.	Old Forge No. 2 shaft, .....	Lackawanna, .....	Skull fractured at base of brain by fall of roof.
12	Frank Voltsa, .....	Polish, .....	Miner, .....	56	M.	Jermyn No. 1, ....	Lackawanna, .....	Leg fractured and lacerated by fall of rock.
14	Albert Woponskie, ...	German, .....	Miner, .....	46	M.	William A. ....	Lackawanna, .....	Leg fractured by fall of rock.
15	Joseph Johnson, .....	American, .....	Driver, .....	19	S.	Consolidated slope, .....	Luzerne, .....	Leg broken. The car on which he was sitting jumped the track.
20	Anthony Schiborowsky, ..	Polish, .....	Rope rider, .....	22	S.	Sibley, .....	Lackawanna, .....	Foot bruised by a derailed car.
21	Frank Zegala, .....	Polish, .....	Laborer, .....	44	M.	Seneca, .....	Luzerne, .....	Seriously squeezed about body by being caught between car and roof.
27	Mike Penshinsky, ...	Slavonian, .....	Laborer, .....	24	M.	Sibley, .....	Lackawanna, .....	Back bruised by fall of rock.
27	Enoch Yokoboski, .....	Lithuanian, .....	Miner, .....	38	S.	Seneca, .....	Luzerne, .....	{ Burned on face, hands and body by an explosion of gas.
27	Joseph Godoskie, .....	Lithuanian, .....	Miner, .....	29	S.	Seneca, .....	Luzerne, .....	{
27	John Mostus, .....	Lithuanian, .....	Laborer, .....	23	S.	Seneca, .....	Luzerne, .....	{
27	Charles Zaladaige, .....	Lithuanian, .....	Laborer, .....	22	S.	Seneca, .....	Luzerne, .....	{
27	George Wood, .....	American, .....	Runner, .....	24	S.	Lawrence, .....	Lackawanna, .....	{ One rib broken by falling between cars. Outside.
March 6								



TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
<b>March</b>								
10	Mike Fritz,	Polish,	Miner,	32	M.	Avoca,	Luzerne,	Hip broken by fall of rock.
10	Hovah Raising,	Polish,	Laborer,	25	S.	Avoca,	Luzerne,	Face cut and collar bone broken by fall of rock.
13	Leo Boylan,	American,	Driver,	16	S.	Spring Brook,	Lackawanna,	Small bone of leg broken while removing sprag from car.
13	John Sheridan,	Irish,	Miner,	39	M.	Langcliff,	Luzerne,	Hand bruised while coupling cars.
22	Peter Perige,	Polish,	Miner,	30	M.	Central No. 13,	Luzerne,	Compound fracture of the fibula by cars jumping track.
23	John Pritchard,	American,	Brakeman,	21	S.	Langcliff,	Luzerne,	Bruised ankle by cars jumping the track. Outside.
24	Alonzo Webb,	American,	Laborer,	19	S.	Spring Brook,	Lackawanna,	Simple fracture of left big toe by fall of rock.
28	Michael Derescavage,	Polish,	Miner,	45	M.	Seneca,	Luzerne,	Feet and hands slightly burned by an ignited "blower."
<b>May</b>								
4	Lewis Hatton,	American,	Motor helper,	20	S.	Connell,	Sullivan,	Wrist and four knuckles dislocated, little and third finger broken by electric motor.
16	Joseph Bianco,	Italian,	Miner,	27	S.	Spring Brook,	Lackawanna,	Cut, bruised and burned by a premature blast.
19	Frank Langan,	American,	Runner,	21	S.	Seneca,	Luzerne,	Hip and knee dislocated by passing in front of a car in motion.
25	Peter Murray,	Scotch,	Miner,	59	M.	Larnum No. 3,	Luzerne,	Cut by flying coal caused by premature blast. Not serious.
26	Joseph Suchuskie,	Polish,	Laborer,	23	S.	Barnum No. 2,	Luzerne,	Head slightly cut by fall of coal.
21	John Hitchcock,	Lithuanian,	Miner,	26	S.	Seneca,	Luzerne,	Back badly skinned by fall of rock.
23	John Smigie,	Polish,	Loader,	32	S.	Lawrence,	Lackawanna,	Broken wrist and bad gash on knee by being thrown from big cars. Outside.
25	Hughley McGuire,	Scotch,	Sinker,	45	M.	Reliance,	Luzerne,	Fracture on right side of skull by falling rock in shaft.
<b>July</b>								
13	John O'Boyle,	American,	Runner,	23	S.	Consolidated slope,	Luzerne,	Leg broken by cars.
16	Joseph Haddock,	Polish,	Miner,	33	M.	Langcliff,	Luzerne,	Hand pierced by miner's needle.
<b>Aug.</b>								
30	Andrew Milnechic,	Polish,	Miner,	33	M.	Seneca,	Luzerne,	Hands and face slightly burned by gas.
10	Byron Stallard,	American,	Miner,	35	M.	Spring Brook,	Lackawanna,	Back and left leg bruised by fall of rock.
<b>Sept.</b>								
11	Frank Venavage,	Lithuanian,	Driver,	17	S.	Seneca,	Luzerne,	Leg broken by a derailed car.
19	Raymond McGlynn,	American,	Slatepicker,	16	S.	Seneca,	Luzerne,	Leg cut and ankle sprained by car. Outside.

Sept.	27	Stanley Mizgar,	Polish,	Laborer,	29	M.	Barnum No. 3,	Luzerne,	Hands and thumb cut by fall of rock.
Oct	4	Patrick Farrell,	American,	Driver,	16	S.	Spring Brook,	Lackawanna,	Shoulder dislocated, legs and body bruised. Squeezed between car and rib.
	5	Edward Bannon,	American,	Rock man,	27	S.	Seneca,	Luzerne,	Hands and face slightly burned by gas.
	6	George Zurko,	Slavonian,	Laborer,	21	S.	Langcliff,	Luzerne,	Contusion of right shoulder and cuts by fall of rock.
	9	Wm. S. Carney,	American,	Carpenter,	37	M.	Hallstead,	Luzerne,	Compound fracture of leg by rolling lumber. Outside.
	9	Michael Coslofskie,	Lithuanian,	Miner,	34	S.	Seneca,	Luzerne,	Hands and face slightly burned by gas.
	11	Frank Angelo,	Italian,	Ashtan,	54	M.	Jermyn No. 2,	Lackawanna,	Shoulder and two ribs broken by falling under ash car. Outside.
	23	Jacob Stasofsky,	Polish,	Laborer,	28	S.	Barnum No. 2,	Luzerne,	Ankle injured by falling rock.
	23	Frank Anglo,	Italian,	Laborer,	25	S.	Old Forge No. 1,	Lackawanna,	Simple fracture of leg by falling rock.
	25	James Tigue,	American,	Car oiler,	16	S.	Langcliff,	Luzerne,	Right thumb cut off and head and left heel lacerated by falling under car. Outside.
Nov.	9	Martin Cooper,	American,	Footman,	26	S.	Barnum No. 2,	Luzerne,	Leg squeezed by cars. Outside.
	13	John Novak,	Austrian,	Laborer,	51	M.	Hallstead,	Luzerne,	Leg broken by conveyor line. Outside.
	20	John Sincavage,	Lithuanian,	Driver,	19	S.	Seneca,	Luzerne,	Bruised leg. Squeezed between mine car and a closing door.
	26	William Lane,	English,	Miner,	37	M.	William A.,	Luzerne,	Injured severely about head and face cut by a premature explosion.
Dec.	26	Nazerine Freschoni,	Italian,	Laborer,	25	S.	Barnum No. 2,	Luzerne,	Instep broken and scalp fractured by fall of rock.
	7	George Meagle,	Polish,	Laborer,	45	M.	William A.,	Luzerne,	Injured stomach. Fell while playing. Outside.
	8	Morio Champokenie,	Italian,	Slatepicker,	14	S.	William A.,	Luzerne,	Scalp wound and internal injuries by fall of clay. Outside.
	20	Mollie Mangan,	Irish,	Laborer,	27	M.	William A.,	Luzerne,	Right leg broken by fall of top rock.
	29	Steve Barnofski,	Polish,	Miner,	35	M.	Connell,	Sullivan,	

## FATAL ACCIDENTS.

## Falls of Coal, Slate and Roof

March 5, Barnum No. 3 Colliery, Frank Makorki, Polish laborer, was killed instantly by fall of top coal.

May 22, Sibley Colliery, Mike Frank, Italian miner, was killed instantly by fall of top coal.

June 16, Connell Colliery, Joel Saxton, American machine helper, had his legs and left arm broken, and was also injured internally by fall of top coal. His injuries proved fatal.

January 12, Jermyn No. 1 Colliery, Eddie Conesky, Polish miner, had his head and face crushed by fall of rock.

March 1, Barnum No. 3, Joseph Casper, Polish laborer, was killed instantly by fall of roof.

July 5, Babylon Colliery, Joseph Stull, American driver had his skull fractured by fall of a rock, which had resisted the combined efforts of miners to displace it.

October 6, Jermyn No. 1, Jake O'Shall, Polish laborer, had his head and breast injured by fall of rock, and his injuries proved fatal. The accident occurred in the place next to his, where in the miner's absence, he, unauthorized, fired a rib hole, with above results.

December 7, Old Forge No. 2, Michael Quinn, Irish miner, was killed by fall of top rock, while barring coal after firing a shot. The roof fell on him.

January 16, Seneca Colliery, John McLaughlin, Irish miner, received fatal injuries from fall of top roof, which had previously resisted his efforts to displace it.

January 26, Old Forge No. 1, Andrew Kelley, American trackman, while engaged in tearing out a road sat down under a bad piece of roof. The rock fell, and he received injuries which caused his death.

February 14, William A Colliery, John Seemonlovich, Russian laborer, was killed by fall of roof. A large rock of usual size, which had a slip, fell. The conditions were such that it was impossible to detect its insecurity. Neither miner or laborer was aware of the danger.

March 9, Central Law Shaft, Simon Brass, Polish laborer, was killed instantly by fall of rock. The roof was treacherous, and was not timbered. Both foremen and miner thought that the place was safe.

May 25, Old Forge No. 1, Mike Scariato, Italian miner, was instantly killed by fall of rock. He was working under a large saddle rock which was improperly secured. It fell with the above result.

May 26, Barnum No. 2, Frank Parkoski, Polish laborer, was killed by fall of roof. Corner's jury rendered the verdict: "Deceased met his death through carelessness of his miner."

June 5, William A Colliery, Lucantoni Jondalito, Italian laborer, returned to the face, after a shot was fired, before his miner had made an examination. He did not understand the warning cries of the miner, as each spoke a different language. He received internal injuries from fall of rock which caused his death.

July 16, Seneca Colliery, John Yescavage, Polish miner, received internal injuries from fall of rock, which proved fatal. After firing a shot, he was examining his place, when a rock fell on him.

August 7, Barnum No. 3, Edward Barlow, American miner, was instantly killed by fall of roof. At the coroner's inquest the jury rendered the verdict: "His death was due to taking out too much pillar, and leaving nothing to support the roof. The jury recommends that the company instruct the miners more carefully concerning work of this character."

September 10, Spring Brook Colliery, Benjamin Kilmer, American laborer, had his back broken by fall of rock and died. While miner and laborer were in the act of standing a prop under some bad roof, it fell, and both were injured.

September 12, Consolidated Shaft, Luery Prosek, Austrian miner, was killed instantly by fall of rock. He, with his laborer, entered the mine through a drift, when it was idle without the foreman's knowledge. A rock fell on him while apparently in the act of standing a prop under it.

October 11, Jermyn No. 1, Reuben Casseroli, Italian laborer, was killed by fall of rock, which occurred while the miner was preparing a cartridge at his box.

October 23, Barnum No. 2, Steven Pudis, Polish miner, was instantly killed by fall of rock. He did not place props where instructed to do so by the foreman, and when his partner miner warned him not to go under the rock, he replied, "Mind your own business."

November 20, Consolidated Slope, Jacob Roth, Polish laborer, had his neck broken by fall of rock, which had been previously examined by the miners, and was thought safe.

November 22, Barnum No. 3, Joseph James, Polish miner, was fatally injured by fall of rock. He was engaged in barring down some bad roof; one piece resisted his efforts; he turned around to try another, and while so occupied, the first piece fell with above results.

### Mine Cars

June 1, Connell, George Hatton, American doorboy, had his leg so badly lacerated that amputation was necessary. His injuries resulted in death. While leaning on a sand car, a trip that was entering his door, collided with it and caught his leg. The coroner's jury rendered the verdict: "Contributory negligence on the part of the deceased."

August 7, Barnum No. 3, Anthony Montong, Italian miner, acting as driver, was crushed between car and prop. in his own place, while in the act of removing the stretcher. The coroner's jury rendered the following verdict: "His death was probably due to his lack of experience as driver, and the prop was not the lawful distance from the rail. We agree, that the Pennsylvania Coal Company should be careful in their inspection of the distance given for passing cars."

### Suffocation by Gas

August 7, Spring Brook, David Aston, Welsh miner, was asphyxiated by powder fumes. Immediately after firing a shot, he entered the face, but made a hasty retreat to the fresh air, where he dropped over and died. The coroner's jury rendered the following verdict: "He was overcome by smoke and gas and died. The jury exonerates the company from all blame."



### Explosions of Powder and Dynamite

March 1, Old Forge No. 1, Roji Pasenicci, Italian miner, had his left hand cut off, had a compound fracture of the right arm, and was cut about the face. The injuries were caused by a premature explosion of dynamite which he was handling.

#### Premature Blasts

January 31, Barnum No. 2, Charles Smith, Polish miner, had his skull fractured by a premature blast. It resulted in death. He was firing a shot, and almost as soon as he gave the warning to fire the blast occurred. The cause could not be definitely ascertained.

#### Falling into Shafts

October 1, Reliance, Jeremiah Mooney, American fireboss, received a fracture of the skull and concussion of the brain, which resulted in death. When he was descending the shaft in the morning, the bucket was stopped within a short distance of the bottom. He either fell or stepped off, toppled over, and struck his head with the above result.

#### Machinery, Outside

September 17, Barnum No. 1, James Moffatt, American engineer, had his skull fractured by his engine breaking. The injury caused his death. While controlling his engine with a lever, the brake band wheel broke, and he was thrown on a cement floor.

#### Suffocation by Gas

December 20, Avoca, Peter Brondish, Polish laborer, was asphyxiated by sulphur fumes. He was found under the trestle, where it is presumed he crawled to hide his shovel, after the day's work. The sulphur fumes were generated by the burning dump. The jury was unable to fix the responsibility.

#### Miscellaneous

July 23, Hallstead, John Evans, American carpenter, had his skull fractured by falling from the breaker. While standing on one plank in order that he might pry up another, the plank beneath him broke, and he fell fifty feet.

November 1, Sibley, S. E. Elliott, American carpenter, was killed instantly by a fall from the breaker. While climbing the framework, a cleat, which he had grasped, broke and he fell to the ground.

December 1, Hallstead, Henry Basham, American carpenter, had his skull fractured by losing his balance on the back brace of a tower and falling to the ground.



## CONDITION OF COLLIERIES AND IMPROVEMENTS

## PENNSYLVANIA COAL COMPANY

**Old Forge Colliery.**—The two mountain drifts have been completed, and the Clark and Marcy veins are being developed. An air shaft has been sunk from the surface to the Clark vein. A new stone fan house has been erected, equipped with a 20 foot Guibal fan, driven by a 55 H. P. electric motor, which will soon be in operation. A system of electric haulage is being installed; the boiler house was extended 100 feet, and two batteries of Sterling boilers installed, each battery having 368 H. P. A new power house has been erected 90 x 40, equipped with three dynamos, 2-325 K. W. and 1-100 K. W., 2,300 volts, for lighting purposes. The latest motor is run by a 15x16 engine; the other two, which are used distinctly for haulage purposes, are driven by two 24x26 simple automatic engines, 550 H. P. each. The power house is erected at the breaker, and the power carried by wire to Old Forge No. 1 shaft and slope, Old Forge No. 2 shaft, and the Mountain drifts; also to Laws and No. 13 shaft of Central Colliery. In all 20 motors will be installed, five 13 ton, and fifteen seven and one-half ton. Foundations are ready for a new addition to Old Forge washery and jigs will be installed to prepare buck, pea and chestnut sizes. A conveyor line has been built to take the culm from Old Forge dump to new washery. A new store house and office has been built, 50x25.

**Inside.**—A large pumping plant has been built in red ash vein, at Old Forge No. 2, and two pumps installed, having a combined capacity of 4,000 gallons per M.

**Central Colliery.**—The breaker has been remodeled from top to bottom, and additional screens, shakers and mechanical slate pickers have been installed, to clean and prepare mud screen coal. The breaker will have a capacity of 1,800 tons, an increase of 600 tons; the pockets are enlarged and strengthened and other necessary changes made in the machinery. At Law shaft a new fan shaft has been sunk from the surface to the red ash vein, size 12x12.

Over this new shaft has been built a modern brick fan house equipped with a 20 foot Guibal fan, driven by steam. The old Central washery was abandoned and a new one built having a capacity of 1,000 tons per day, equipped with jigs for chestnut, pea and buck-wheat coal. The store house which was destroyed by fire in December, 1905, was replaced by a brick structure 25x60. A ten inch bore hole has been sunk to the bottom of Red Ash vein, through which water will be pumped to the surface. A tail rope haulage system has been installed in the Clark vein slope. One  $7\frac{1}{2}$  ton electric motor is in operation in No. 13 shaft, and three of the same type in Law shaft; two more will be added in a short time. A rock tunnel, 7x10, driven on a 21 per centum grade will connect the bottom vein at Law shaft with the top red ash vein at the Avoca. The coal in the Avoca property will be taken through this rock tunnel and prepared for market at the Central Colliery, and the Avoca plant will be abandoned.

**Barnum Colliery, Inside.**—Have driven a rock tunnel from the Marcy to the Clark vein in No. 2 shaft. Also a rock plane from the bottom or red ash vein to the top split or Babylon vein. Coal to be dropped down to bottom vein by an engine. **Outside.**—Have erected

a brick washhouse at boiler house for the firemen, equipped with steel lockers and other improvements which make it modern in every respect.

#### LEHIGH VALLEY COAL COMPANY

Seneca Colliery, Outside.—The fire that developed from a smouldering condition in the old culm bank, and threatened the destruction of the breaker, was isolated by a trench cut through the bank. The Coxey shaft fan house was protected from sparks of passing engines by a corrugated iron, and the shaft is completely recribbed. 5276 feet of diamond drill test holes were completed for protection against accidents, in testing cover limits over Pittston and Marcy veins. A Williams crusher was installed for Pittston vein flushing. Inside.—A 4 inch drainage hole drilled from Marcy to red ash vein was completed. Two rock tunnels, driven through the upthrow in the red ash vein, were finished during the year.

William A and Lawrence Collieries, Outside.—An 8 inch rope haulage hole was drilled from surface to red ash vein at Babylon mine. Beginning January 1, 1907, the Lawrence breaker will be operated as a washery only, the coal being prepared at William A breaker. Inside.—A new haulage road has been driven 2,500 feet through middle split pillars to Babylon mines to minimize transportation. The road was continued in the bottom split across the Babylon tract to the westward, where a 300 foot tunnel opens up the virgin coal. This haulage road will be eventually connected with No. 10 tunnel at Campbell's Ledge, when it will be a continuous road of 16,000 feet in length.

#### HILLSIDE COAL AND IRON COMPANY

Consolidated Slope.—They are steadily opening on the bottom Red Ash vein at Consolidated slope, and have also just opened on the split of the Checker underlying the main Checker vein, about six feet apart. This has been done direct from the Consolidated main slope.

#### HUDSON COAL COMPANY

Langeliff Colliery.—No. 2 slope in Red Ash vein extended 380 feet. One 54 inch locomotive type boiler installed.

#### JERMYN AND COMPANY

Jermyn No. 1 Colliery.—This mine went on strike February 13 and the strike continued until August 23. On October 27 a cyclone destroyed the breaker which is now being rebuilt. During the suspension new sills and pockets were placed under the breaker.

Jermyn No. 2 Colliery.—The men at this mine went on strike February 13 and remained out until November 1, when operations were again resumed. A new rope haulage system was installed in the outside slope to the Clark and Marcy veins.

#### ELLIOTT, McCLURE AND COMPANY

Sibley Colliery.—On June 23 a fire broke out in the breaker about 10:45 A. M. and destroyed it, also the engine house, boiler house and supply house. A new breaker, boiler plant and other buildings are

now in course of erection. A new shaft from the surface to No. 3. Dunmore vein is being sunk, and it is expected that all improvements will be completed early in the Spring.

#### AUSTIN COAL COMPANY

Austin Tunnel.—A second opening and return have been driven in the Clark vein, connecting the new slope workings with those of the old. A shaft will also be sunk, connecting the Marcy and Clark veins for a second opening.

#### O'BOYLE-FOY ANTRACITE COAL COMPANY

This is a new operation, and they started to prepare coal in the early Spring. However, not a great deal of development work has been done. The B and C veins are opened and a fan and fan house have been installed and the fan is now in operation.

#### RELIANCE COAL COMPANY

Reliance Colliery.—A new shaft to the Clark vein has been completed, air connections made and carriages installed. A new fan and fan house have also been added.

#### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Hallstead Colliery.—This Colliery has been idle for the past few years, but during the year just closed, a force of men has been constantly employed, reopening the veins and restoring ventilation, also renewing the outside plant. The main shaft and air shaft have been recribbed, and the boiler plant building rebuilt. The following work is being done, but not completed: Preparing the feeder dam tower and shaft, also rebuilding the Hallstead breaker; installing new scales on both the light and loaded tracks, and repairing the bore holes and boiler plant, as well as making general improvements to all the buildings.

#### GENERAL REMARKS

The following Collieries were idle during the year. Central Colliery which consists of No. 13 and Law shaft, suspended operations in March for repairs and improvements and did not resume during the year.

The Hallstead, while very active, neither mined nor prepared any coal. Jermyn Nos. 1 and 3 were idle, through strikes and cyclones, seven months, in all 72 days.

Jermyn No. 2 was idle eight months on account of a strike, working in all 65 days.

The Sibley was destroyed by fire, and worked but five months during the year, or a total of 84 days. Had these mines been in operation, the tonnage for the District would have been much greater.

I desire to call attention to the number of accidents that occurred through individual carelessness. There seems to be no way to prevent them, although ordinary observance of the instructions given would reduce the list at least one-half. Some men will insist that

the roof is safe, that props are not required, etc., and I find it necessary in many instances to stay and see personally that certain things are done. On one occasion I took a man out of the face, and had two cars of rock, under which he was working, barred down. Another feature is, that a number of the men do not speak English and consequently cannot understand instructions given, making it necessary to secure an interpreter. In some instances miner and laborer converse by signs. A number of accidents result from such a state of affairs. The ventilation, drainage and roads are good; improvements are continually being made.

## Sixth District

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Pittston, Pa., February 20, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of herewith transmitting to you my annual report as Inspector of Mines for the Sixth Anthracite District for the year ending December 31, 1906.

The report gives the statistical information as required by law, also a brief description of fatal and non-fatal accidents that occurred during the year, with other useful information.

Respectfully submitted,

H. McDONALD,  
Inspector.



## SUMMARY OF STATISTICS

Number of collieries, .....	15
Number of mines, .....	32
Number of mines in operation, .....	32
Number of tons of coal shipped to market, .....	2,791,484
Number of tons used at mines for steam and heat, ....	223,263
Number of tons sold to local trade and used by employes,	31,364
Number of tons produced, .....	3,046,111
Number of persons employed inside of mines, .....	6,403
Number of persons employed outside, .....	2,523
Number of fatal accidents inside of mines, .....	28
Number of fatal accidents outside, .....	10
Number of non-fatal accidents inside of mines, .....	60
Number of non-fatal accidents outside, .....	21
Number of tons of coal produced per fatal accident inside,	108,789
Number of persons employed per fatal accident inside, ..	229
Number of persons employed per fatal accident outside, ..	252
Number of persons employed per non-fatal accident inside,	107
Number of persons employed per non-fatal accident outside,	120
Number of wives made widows, .....	17
Number of children orphaned, .....	36
Number of steam locomotives used outside, .....	16
Number of compressed air locomotives used inside, ....	10
Number of electric motors used inside, .....	16
Number of fans in use, .....	35
Number of gaseous mines in operation, .....	19
Number of non-gaseous mines in operation, .....	13

TABLE A  
PRODUCTION OF COAL

Names of Operators	Tons
Pennsylvania Coal Company, .....	1,561,105
Lehigh Valley Coal Company, .....	486,476
Hillside Coal and Iron Company, .....	443,910
Hudson Coal Company, .....	320,255
Delaware and Hudson Company, .....	103,678
Traders' Coal Company, .....	109,409
Clarence Coal Company, .....	21,278
Total, .....	<u>3,046,111</u>

Production by Counties

Luzerne, .....	<u>3,046,111</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents		Non-fatal Accidents		Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Inside	Outside									
Pennsylvania Coal Co., .....	13	6	19	39	120,085	40,028	3,485	1,148	4,633	268	191	89	88
Lehigh Valley Coal Co., .....	2	1	3	5	221,525	97,295	695	382	1,077	443	320	139	127
Hillside Coal and Iron Co., .....	8	3	11	1	40,032	443,910	886	450	1,336	105	450	886	450
Hudson Coal Co., .....	1	3	4	12	26,688	26,688	838	345	1,183	105	115	70	115
Delaware and Hudson Co., .....	1	2	3	2	103,678	51,889	214	106	320	214	107	285	92
Traders' Coal Co., .....	4	1	5	1	27,352	109,469	235	92	317	71	252	265	92
Totals and averages for district, .....	28	10	38	60	108,789	50,768	6,403	2,523	8,926	229	272	107	120

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....						1	1		1			1	3	10.71
Falls of roof, .....			1			1	3	2		3	1		11	39.29
Mine cars, .....		1	1								1		3	10.71
Explosions of gas and dust, .....	2												2	7.15
Explosions of powder and dynamite, .....	2								1	1	1		4	10.71
Premature blasts, .....		1				1							2	14.29
Falling into shafts, .....					1								1	3.57
By mules, .....											1		1	3.57
Totals, .....	4	2	2		1	2	4	2	2	4	4	1	28	100.00
Causes of Accidents Outside														
Cars, .....												1	1	10.00
Machinery, .....											1		1	10.00
Suffocation in chutes, etc., .....		1	3										4	40.00
Miscellaneous, .....				2			2						4	40.00
Totals, .....		1	3	2			2				1	1	10	100.00
Grand totals inside and outside, .....	4	3	5	2	1	2	6	2	2	4	5	2	38	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, .....					1	2	1		1	3	1		1	1.66
Falls of roof, .....	3	1					1						12	20.00
Mine cars, .....	1	1					1	1		2	1		8	13.33
Explosions of gas and dust, .....	7	1			3		2	3	7		1		22	36.67
Explosions of powder and dynamite, .....	3								1	1			3	5.00
Premature blasts, .....							1			1		1	3	5.00
By mules, .....					1								1	1.67
Miscellaneous, .....	1	1	1		1	4				2			10	16.67
Totals, .....	14	3	1		6	7	5	4	9	3	2	1	60	100.00
Causes of Accidents Outside														
Cars, .....	1		1								2		4	19.05
Machinery, .....		1				1				1			3	14.28
Miscellaneous, .....	1	1	1	4		1	3					3	14	66.67
Totals, .....	2	2	2	4		2	3			1	2	3	21	100.00
Grand totals inside and outside, .....	16	5	3	4	6	9	8	4	9	9	4	4	81	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	3	1	2	.....	.....	2	1	2	1	2	2	.....	17
Miners' laborers, .....	1	1	.....	.....	1	.....	3	.....	1	.....	1	1	8
Drivers and runners, .....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	3
All other employees, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Totals, .....	4	2	2	.....	1	2	4	2	2	4	4	1	28
Outside													
Slatepickers (boys), .....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
All other employees, .....	.....	.....	3	2	.....	.....	2	.....	.....	.....	.....	1	8
Totals, .....	.....	1	3	2	.....	.....	2	.....	.....	.....	1	1	10
Grand totals inside and outside, ...	4	3	5	2	1	2	6	2	2	4	5	2	38

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	8	.....	.....	.....	3	2	3	3	7	2	.....	1	30
Miners, laborers, .....	5	2	.....	.....	1	2	1	1	1	2	1	.....	15
Drivers and runners, .....	.....	1	1	.....	2	1	1	1	1	1	1	.....	10
Doorboys and helpers, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Company men, .....	1	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	3
All other employees, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Totals, .....	14	3	1	.....	6	7	5	4	9	8	2	1	60
Outside													
Blacksmiths and carpenters, .....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Engineers and firemen, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2
Slatepickers (boys), .....	.....	.....	2	4	.....	1	2	.....	.....	.....	.....	.....	1
All other employees, .....	2	.....	2	4	.....	1	2	.....	.....	.....	2	2	17
Totals, .....	2	2	2	4	.....	2	3	.....	.....	1	2	3	21
Grand totals inside and outside, ....	16	5	3	4	6	9	8	4	9	9	4	4	81



TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....	3	2	...	...	...	...	4	...	2	1	...	...
Scotch, .....	...	...	...	...	...	...	...	...	...	...	1	1
German, .....	...	1	2	...	1	...	...	...	...	...	...	1
Polish, .....	...	...	2	1	...	2	...	2	...	3	1	...
Italian, .....	...	...	...	...	...	...	...	...	...	...	...	...
Slavonian, .....	...	...	...	...	...	1	...	...	...	...	...	1
Lithuanian, .....	1	...	...	...	...	...	...	...	...	...	...	1
Austrian, .....	...	...	...	1	...	1	...	...	...	1	1	3
Hebrew, .....	...	...	...	...	...	...	...	...	...	...	...	1
Totals, .....	4	3	5	2	1	2	6	2	2	4	5	2

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....	5	1	1	4	1	4	3	...	2	3	2	...
English, .....	...	1	...	...	...	1	1	...	...	1	...	...
Welsh, .....	...	...	...	...	...	...	...	...	...	...	...	...
Irish, .....	2	...	...	...	...	...	...	2	2	2	...	...
Polish, .....	2	1	1	...	...	4	...	2	2	2	1	...
Hungarian, .....	...	...	...	...	...	...	...	...	...	...	...	1
Italian, .....	1	...	...	...	...	...	4	1	4	1	...	2
Slavonian, .....	1	...	...	...	2	...	...	...	...	...	...	...
Lithuanian, .....	3	2	...	...	...	...	...	...	...	...	...	...
Austrian, .....	1	...	1	...	1	...	...	1	1	...	1	1
Russian, .....	1	...	...	...	...	...	...	...	...	...	...	...
Totals, .....	16	5	3	4	6	9	8	4	9	9	4	4

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed in-side	Average number of cubic feet per minute provided for each person
Pennsylvania Coal Co.	Shaft,.....	Gaseous.	Fan,.....	20	6.6	5.3	46	8	Guibal,...	Steam, ...	4	81,335	68,990	84,320	195	353
	Shaft,.....	Gaseous.	Fan,.....	20	6.6	5.3	63	1.5				89,818	80,620	97,780	212	380
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	60	1				97,700	61,500	120,600	226	272
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	59	1.2				80,900	66,600	90,500	172	337
	Shaft,.....	Gaseous.	Fan,.....	20	6.6	5.3	46	1.7				103,733	88,094	107,824	192	458
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	*	.....				83,409	76,682	89,420	155	494
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	*	.....				.....	.....	.....	.....	.....
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	*	.....				.....	.....	.....	.....	.....
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	.....	.....				.....	.....	.....	.....	.....
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	.....	.....				.....	.....	.....	.....	.....
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	.....	.....				.....	.....	.....	.....	.....
	Shaft,.....	Gaseous.	Fans,.....	20	6	5	.....	.....				.....	.....	.....	.....	.....
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	.....	.....				.....	.....	.....	.....	.....
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	.....	.....				.....	.....	.....	.....	.....
Lehigh Valley Coal Co.	Shaft,.....	Gaseous.	Fan,.....	20	6	5	78	1.2	Guibal,...	Steam, ...	8	112,200	102,750	114,750	274	376
	Shaft,.....	Gaseous.	Fan,.....	20	6	5	64	1.5				143,960	128,840	169,390	270	477
	Slope,.....	Gaseous.	Fan,.....	12	4.2	3.5	100	5				37,650	33,400	39,850	70	477
	Shaft,.....	Gaseous.	Fan,.....	20	6.6	5.5	60	5				58,000	50,000	60,100	113	544
	Slope,.....	Non-gas.	Fan,.....	20	6	5.5	45	7				59,000	42,000	50,000	105	406
	Slope,.....	Gaseous.	Fan,.....	16	54	4	80	6				58,496	47,527	55,072	104	429
	Slope,.....	Non-gas.	Fan,.....	10	4	3	100	8				50,321	47,551	54,153	104	429
	Shaft,.....	Non-gas.	Fan,.....	20	6	5.1	60	4				60,975	32,345	62,460	118	274
	Shaft,.....	Non-gas.	Fan,.....	20	6	5.1	60	4				.....	.....	.....	.....	.....
	Shaft,.....	Non-gas.	Fan,.....	20	6	5.1	60	4				.....	.....	.....	.....	.....

\*Idle.



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co. Number 5, ..... Ewen, ..... Number 6, ..... Number 10, ..... Number 14, ..... Number 15, ..... Number 8, ..... Number 9, ..... Ewen washery, ..... Ewen washery, .....	Luzerne, .....	William A. May, General Manager. William W. Riggs, General Superintendent.	Scranton, .....	William P. Jennings, Henry T. McMillan, .. Henry T. McMillan, .. William P. Jennings, Carl W. Neufeldt, .. Henry T. McMillan, .. William P. Jennings, Henry T. McMillan, ..	Pittston, .....	Erie
Lehigh Valley Coal Co. Mineral Spring, ..... Heidelberg No. 1, ..... Heidelberg No. 2, .....	Luzerne, .....	S. D. Warriner, General Manager.	Wilkes-Barre, .....	F. E. Zerby, ..... William D. Owens, ..... William D. Owens, .....	Wilkes-Barre Pittston, ... Pittston, ...	Lehigh Valley
Hillside Coal and Iron Co. Butler, ..... Fernwood, ..... Clarence, ..... Susquehanna washery, ..... Yatesville washery, ..... Boston washery, .....	Luzerne, .....	William A. May, General Manager. V. L. Peterson, General Superintendent.	Scranton, .....	E. D. Caryl, ..... John H. Williams, ..... John H. Williams, ..... John H. Williams, ..... John H. Williams, .....	Pittston, ...	Erie N. Y. and W. N. Y. and W. N. Y. and W. N. Y. and W.
Hudson Coal Co. Pine Ridge, ..... Lathin, ..... Delaware and Hudson Co. Delaware, ..... Traders' Coal Co. Ridgewood, .....	Luzerne, .....	C. C. Rose, ..... C. C. Rose, ..... Theo. Hogan, .....	Scranton, ..... Scranton, ..... Avoca, .....	E. K. Pettebone, ..... E. R. Pettebone, ..... Theo. Hogan, .....	Dorrancton, Dorrancton, Avoca, .....	Delaware and Hudson Delaware and Hudson New York, Susquehanna and Western





TABLE 2.—Continued

Names of Operators and Collieries		County									
		Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat								
		Number of tons sold to local trade and used by employees	Total production of coal in tons								
		Number of days worked	Number of employes								
		Number of fatal accidents	Number of non-fatal accidents								
		Number of kegs of powder used	Number of pounds of dynamite used								
		Number of horses and mules									
<b>Hillside Coal and Iron Co.</b>											
Rutler, .....	{ Luzerne..... }	249,251	13,173	4,649	267,103	190	662	1	13,277	17,452	62
Fernwood, .....		85,435	10,463	194	96,082	176	383	1	5,280	23,362	46
Clarence, .....		28,950	3,528	140	32,618	128	203	1	2,376	3,650	26
Totals, .....		363,666	27,154	4,983	395,803	.....	1,250	3	20,932	44,464	134
<b>Washeries:</b>											
Susquehanna, .....	{ Luzerne..... }	28,405	1,886	.....	30,291	105	33	.....	.....	.....	2
Fatesville, .....		1,423	140	.....	1,563	29	19	.....	.....	.....	1
Boston, .....		13,476	177	.....	15,253	27	34	.....	.....	.....	4
Totals, .....		45,304	2,803	.....	48,107	.....	86	.....	.....	.....	7
Totals, .....		403,970	29,957	4,983	443,910	.....	1,336	3	20,932	44,464	141
<b>Hudson Coal Co.</b>											
Pine Ridge, .....	{ Luzerne..... }	188,569	38,666	3,704	290,213	181	792	7	12,453	10,137	92
Lafin, .....		73,152	16,286	604	90,042	139	291	4	6,613	30,487	58
Totals, .....		261,661	54,286	4,308	320,255	.....	1,183	11	19,066	40,624	150
Delaware and Hudson Co., .....	Luzerne.....	77,105	24,349	2,224	103,678	115	320	1	4,722	970	46
Delaware, .....		98,870	6,193	4,346	109,409	229	377	4	8,244	9,200	38
Traders' Coal Co., .....											

## Clarence Coal Co.\*

Clarence, .....	18,787	2,340	151	21,278	59	.....	1,464	2,390	.....
Grand totals, .....	2,791,484	223,263	31,364	3,046,111	.....	8,926	122,404	230,482	1,022

\*Sold out to Hillside Coal and Iron Company in April.

TABLE 2.—Recapitulation

Pennsylvania Coal Co., .....	1,466,897	53,940	10,268	1,561,105	.....	4,623	52,157	79,041	464
Lehigh Valley Coal Co., .....	429,184	52,198	5,064	486,476	.....	1,077	15,829	52,793	183
Hillside Coal and Iron Co., .....	408,970	29,957	4,983	443,910	.....	1,336	20,932	44,484	151
Hudson Coal Co., .....	261,661	54,286	4,308	320,255	.....	1,183	19,666	40,624	150
Delaware and Hudson Co., .....	77,105	24,349	2,224	103,678	.....	320	4,722	970	46
Traders' Coal Co., .....	98,870	6,193	4,346	109,409	.....	377	8,244	9,240	38
Clarence Coal Co., .....	18,787	2,340	151	21,278	.....	.....	1,464	2,390	.....
Totals, .....	2,791,484	223,263	31,364	3,046,111	.....	8,926	122,404	230,482	1,022

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Pennsylvania Coal Co.,	Luzerne	6	132	67	10,192	10,324	7	10	4	154	14	19,663	9,728	1	9
Lehigh Valley Coal Co.,		.....	.....	19	2,960	2,960	2	.....	.....	53	12	7,812	5,352	1	.....
Hillside Coal and Iron Co.,		.....	.....	22	3,214	3,214	6	.....	12	53	6	2,386	1,348	3	.....
Hillside Coal Co.,		.....	.....	21	4,145	4,145	1	.....	.....	96	6	6,400	3,400	.....	5
Delaware and Hudson Co.,		16	450	5	653	1,073	.....	.....	.....	45	3	5,200	1,900	.....	2
Traders' Coal Co.,		8	160	1	125	285	.....	.....	.....	12	1	900	200	.....	.....
Totals,	.....	29	742	135	21,161	21,903	16	10	16	413	42	41,271	21,928	4	16

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Pit bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employees	Total outside	
<b>Pennsylvania Coal Co.</b>																						
Number 8, .....	Luzerne	1	1	5	123	118	49	11	.....	10	27	340	.....	1	4	16	62	27	3	34	141	481
Ewen, .....		3	3	3	247	190	72	46	5	36	148	755	.....	1	14	24	52	25	3	97	216	971
Number 6, .....		4	4	3	338	273	93	43	2	35	119	912	.....	1	11	17	46	24	3	103	202	1,114
Number 10,* .....		2	2	1	158	158	75	13	3	27	30	468	.....	1	19	22	71	20	3	68	199	667
Number 14, .....	Luzerne	3	3	3	343	310	168	25	1	82	59	1,010	.....	1	19	24	28	31	5	118	226	1,236
Totals, .....		13	13	11	1,209	1,049	457	138	12	290	383	3,485	.....	5	65	97	253	127	17	420	984	4,469
<b>Washington</b>																						
<b>Waskiesies</b>																						
Number 6, .....	Luzerne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number 8, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ewen, .....	Luzerne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....		13	13	11	1,209	1,049	457	138	12	290	383	3,485	.....	5	69	116	253	127	18	563	1,148	4,633
<b>Lehigh Valley Coal Co.</b>																						
Mineral Spring, .....	Luzerne	2	.....	4	143	71	64	15	7	.....	57	363	.....	1	12	25	12	10	3	87	150	518
Heidelberg No. 1, .....		1	.....	1	91	34	31	.....	2	22	.....	182	.....	1	6	9	31	6	3	62	118	390
Heidelberg No. 2, .....		1	.....	1	55	41	25	3	4	20	.....	150	.....	1	7	15	35	6	3	47	114	284
Totals, .....	Luzerne	4	.....	6	289	146	120	18	13	42	57	695	.....	3	25	40	78	22	9	196	382	1,077
Totals, .....		13	13	11	1,209	1,049	457	138	12	290	383	3,485	.....	8	69	116	253	127	18	563	1,148	4,633

\*Employees reported at Number 10 colliery were employed at the other collieries of the Pennsylvania Coal Company, but were not included in the totals of the other collieries.





Traders' Coal Co.,	2	1	2	139	65	45	12	2	26	.....	285	1	1	6	10	27	13	4	30	92	377
Ridgewood, .....	27	18	34	2,423	1,810	853	295	51	450	532	6,403	3	19	140	273	550	276	46	1,216	2,523	8,926
Grand totals, .....																					

TABLE 3.—Recapitulation

Pennsylvania Coal Co.,	13	12	11	1,209	1,049	457	138	12	200	582	3,485	.....	2	09	110	253	127	18	563	1,148	4,623
Lehigh Valley Coal Co.,	4	.....	6	289	146	120	18	13	42	57	685	.....	5	25	43	78	22	9	196	382	1,077
Hillside Coal and Iron Co.,	4	.....	1	369	252	105	15	15	102	52	886	.....	2	1	26	105	20	5	258	450	1,336
Hudson Coal Co.,	3	3	11	361	231	98	12	6	85	28	838	.....	2	1	30	91	84	2	123	343	1,183
Delaware and Hudson Co.,	1	1	3	65	67	28	10	5	24	12	144	.....	1	8	8	26	14	1	34	166	380
Traders' Coal Co.,	2	1	2	130	65	45	12	2	26	.....	285	.....	1	6	10	27	13	4	30	92	377
Totals, .....	27	18	34	2,423	1,810	853	295	51	450	532	6,403	3	19	140	273	550	276	46	1,216	2,523	8,926



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 17	Michael Noone, .....	American...	Miner, .....	45	S.	.....	.....	Number 14 tunnel.	Luzerne,.....	These men were burned by an explosion of gas and died January 21. Fatally burned by powder. Died January 30.
18	Thomas O'Brien, .....	American...	Miner, .....	26	S.	.....	.....	No. 9 shaft, .....	Luzerne,.....	
23	Anthony Rizovitch, ..	Lithuanian...	Laborer, .....	22	S.	.....	.....	.....	.....	
25	John Armstrong, .....	American...	Miner, .....	50	M.	1	2	Number 14 shaft...	Luzerne,.....	Fatally burned by powder. Died February 4.
5	James Boylan, .....	American...	Shatepicker, ..	16	S.	.....	.....	Pine Ridge, .....	Luzerne,.....	Snothered in rice coal pocket in breaker.
22	Felix Deshefsky, .....	Polish, .....	Miner, .....	28	M.	1	1	Lafin shaft, .....	Luzerne,.....	Fatally injured by premature blast. Died February 28.
27	Joseph Eckert, .....	American...	Driver, .....	18	M.	1	.....	Lafin tunnel, .....	Luzerne,.....	Fatally squeezed by mine cars. Died same day.
3	Joseph Popko, .....	Polish, .....	Miner, .....	31	M.	1	2	Pine Ridge, .....	Luzerne,.....	Killed by car running against him at face of breast.
9	Michael Sabhoff, .....	Italian, .....	Culmman, .....	36	M.	1	.....	Number 8 washery, ..	Luzerne,.....	Snothered by a rush of culm on bank.
9	Joseph Sarnella, .....	Italian, .....	Ashman, .....	37	M.	1	1	Number 14, .....	Luzerne,.....	These two men were asphyxiated in the pit under the boiler room by the gas from the fires.
9	John Russian, .....	Polish, .....	Ashman, .....	42	M.	1	6			Killed by fall of top rock in breast.
10	Joseph Jastremski, ..	Polish, .....	Miner, .....	35	M.	1	.....	Ridgewood, .....	Luzerne,.....	These men were fatally burned by an explosion caused by forcing culm on a hose on burning culm on a bank. Was killed April 11, and Marwell died April 12.
7	Isaac Weil, .....	Hebrew, .....	Co. laborer, .....	43	S.	.....	.....	Ewen washery, ..	Luzerne,.....	Killed by falling from the cage down the shaft.
7	Michael Marwell, .....	Italian, .....	Co. laborer, .....	36	S.	.....	.....	.....	.....	
22	John Kopic, .....	Polish, .....	Laborer, .....	25	S.	.....	.....	Pine Ridge, .....	Luzerne,.....	Killed by premature blast by forcing powder in the hole.
23	Rinaldo Bydzari, .....	Italian, .....	Miner, .....	20	S.	.....	.....	Clarence, .....	Luzerne,.....	Fatally injured by fall of middle rock.
23	Peter Ristova, .....	Italian, .....	Miner, .....	38	M.	1	2	Number 10 shaft...	Luzerne,.....	Died same day.
7	Sebastian Milon, .....	Austrian, .....	Laborer, .....	38	M.	1	3	Hoyte, .....	Luzerne,.....	Killed by fall of rock at face of breast.
7	Jno. J. Walsh, .....	American...	Miner, .....	47	S.	.....	.....	Pine Ridge, .....	Luzerne,.....	Killed at face of his breast by fall of rock.
10	Richard Hurry, .....	American...	Laborer, .....	21	S.	.....	.....	Number 8 shaft, ..	Luzerne,.....	Killed by fall of top coal while robbing pillars.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
July	25 George Yale, .....	American,...	Co. laborer,...	32	S.	.....	.....	Laurel Run, .....	Luzerne,.....	These men were fatally injured by the collapse of a trestle they were taking down. Yale died August 2, and Geary died July 28.
27 John Geary, .....	American,...	Co. laborer,...	21	S.	.....	.....	.....	.....	.....	
28 Lawrence Waduskie, .....	Slavonian,...	Laborer, .....	33	M.	1	2	.....	Number 14 shaft,...	Luzerne,.....	
Aug.	27 Guitan Musto, .....	Italian,.....	Miner, .....	42	M.	1	0	Number 4 shaft, .....	Luzerne,.....	
30 Dominick Santena, .....	Italian,.....	Miner, .....	29	S.	.....	.....	.....	Number 14 tunnel, .....	Luzerne,.....	Fatally injured by fall of top rock. Killed by fall of top rock.
Sept.	7 Michael Gallagher, .....	American,...	Laborer, .....	23	S.	.....	.....	Lafin shaft, .....	Luzerne,.....	Fatally injured by fall of top rock. Killed by fall of coal while bailing water.
Oct.	26 Michael Price, .....	American,...	Miner, .....	33	M.	1	4	Ridgewood, .....	Luzerne,.....	Killed by blast he was firing.
16 John T. Scott, .....	American,...	Chargeman, .....	33	M.	1	1	.....	Number 14 shaft, .....	Luzerne,.....	Killed by fall of rock in tunnel after re-turning from firing blast.
16 Michael Montanto, .....	Italian,.....	Miner, .....	28	S.	.....	.....	.....	Number 11 shaft, .....	Luzerne,.....	Fatally injured by premature blast he was firing. Died same day.
16 Wardrick Samara, .....	Italian,.....	Miner, .....	35	M.	1	2	.....	Butler slope, .....	Luzerne,.....	Killed by fall of rock while robbing pillars.
Nov.	23 Santi Nick, .....	Italian,.....	Miner, .....	33	M.	1	2	Ridgewood, .....	Luzerne,.....	Killed by fall of rock after returning from firing a blast.
7 John Lois, .....	Polish,.....	Laborer, .....	19	S.	.....	.....	.....	Number 14 shaft, .....	Luzerne,.....	Killed by fall of rock and rider coal.
12 Luke Sterka, .....	Austrian,...	Miner, .....	37	M.	1	2	.....	Ridgewood, .....	Luzerne,.....	Fatally squeezed by mine car. Died November 14.
17 Andrew Sulcan, .....	Polish,.....	Slatepicker, .....	15	S.	.....	.....	.....	Butler, .....	Luzerne,.....	Fatally injured. Foot caught in breaker machinery. Died same day.
15 Charles Groth, .....	German,.....	Driver, .....	20	S.	.....	.....	.....	Delaware, .....	Luzerne,.....	Fatally kicked by his mule. Died next day.
24 Patrick Pants, .....	Italian,.....	Miner, .....	23	S.	.....	.....	.....	Lafin shaft, .....	Luzerne,.....	Fatally injured by an explosion of dynamite. He was thawing the dynamite with his lamp. Died December 18.
Dec.	4 Joseph Krool, .....	Austrian,...	Laborer, .....	24	S.	.....	.....	Pine Ridge, .....	Luzerne,.....	Fatally injured. Leg caught between ear bumpers. Outside. Died same day.
12 James Walker, .....	Scott,.....	Driver, .....	17	S.	.....	.....	.....	Number 14 tunnel, .....	Luzerne,.....	

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	3 James Mahon, .....	American,...	Coal inspector, ...	35	S.	Ridgewood, .....	Luzerne,.....	Leg broken. Thrown from railroad car at breaker. Outside.
	3 Michael Roach, .....	Irish,.....	Company laborer, ..	46	M.	No. 6 shaft, .....	Luzerne,.....	Shoulders squeezed. Caught between car and rib.
	4 Charles Costick, .....	Slavonian,...	Coal dumper, ...	28	M.	No. 6 shaft, .....	Luzerne,.....	Rupture of the pelvis. Fell under locomotive. Outside.
	4 Thomas Swatzie, .....	Austrian,...	Miner, .....	26	S.	No. 5 shaft, .....	Luzerne,.....	Face and hands burned by powder he was handling.
	4 Peter Budze, .....	Italian,.....	Miner, .....	27	S.	No. 5 shaft, .....	Luzerne,.....	Face and hands burned by gas in cross-cut
	7 Patrick King, .....	Irish,.....	Miner, .....	48	M.	No. 11 shaft, .....	Luzerne,.....	Back painfully bruised by fall of rock.
	8 Steve Single, .....	Polish,.....	Miner, .....	33	M.	No. 5 shaft, .....	Luzerne,.....	Slightly burned on face by gas. He was warned of the danger.
	8 Peter Kuruts, .....	Polish,.....	Miner, .....	46	M.	No. 5 shaft, .....	Luzerne,.....	Face burned by gas at the same time as the above.
	12 John Kinney, .....	American,...	Laborer, .....	32	M.	Laurel Run, .....	Luzerne,.....	These men had their hands and faces burned by gas in rock tunnel.
	12 Alex Raymond, .....	American,...	Laborer, .....	24	M.	No. 14 tunnel, ...	Luzerne,.....	These two men were burned about the face and hands by an explosion of gas.
	15 Thomas Nooné, .....	American,...	Laborer, .....	40	S.	No. 14 tunnel, ...	Luzerne,.....	Leg broken. Struck by fall of rock.
	15 Thomas Mangan, .....	American,...	Laborer, .....	32	S.	No. 14 tunnel, ...	Luzerne,.....	Leg broken. Struck by plane rope.
	16 Andrew Petravage, .....	Lithuanian,...	Laborer, .....	22	M.	Coal Brook, .....	Luzerne,.....	Face and hands burned by premature explosion of powder.
	18 Peter Pulchus, .....	Russian,.....	Miner, .....	31	M.	No. 14 shaft, .....	Luzerne,.....	Back painfully bruised by fall of rock.
	18 Frank Skietis, .....	Lithuanian,...	Miner, .....	22	S.	No. 6 shaft, .....	Luzerne,.....	Ankle sprained while moving a plank in breaker. Outside.
Feb.	23 Ignat Zemiatowes, ....	Lithuanian,...	Miner, .....	34	M.	No. 6 shaft, .....	Luzerne,.....	Knee cut and bruised by car and head block.
	7 Enoch Hoskins, .....	English,.....	Carpenter, .....	37	M.	Ewen, .....	Luzerne,.....	Leg and arm broken. Clothing caught on shattering in break by slate rock.
	11 John Ziskey, .....	Polish,.....	Driver, .....	18	S.	No. 14 shaft, .....	Luzerne,.....	Leg broken by fall of rock.
	15 Martin Golden, .....	American,...	Slatepicker, .....	16	S.	Butler, .....	Luzerne,.....	Leg broken. Caught between car bumpers. Outside.
March	19 Frank Torduskis, .....	Lithuanian,...	Laborer, .....	24	S.	No. 14 shaft, .....	Luzerne,.....	Leg broken. Struck by plank while unloading it from car. Outside.
	23 Frank Leda, .....	Lithuanian,...	Laborer, .....	38	S.	No. 14 shaft, .....	Luzerne,.....	Leg broken. Caught between car bumpers. Outside.
	2 John Golda, .....	Polish,.....	Footman, .....	39	M.	Mineral Springs, ..	Luzerne,.....	Leg broken. Struck by plank while unloading it from car. Outside.
	17 John Strogoe, .....	Austrian,...	Car dumper, .....	25	M.	Pine Ridge, .....	Luzerne,.....	Leg broken. Struck by plank while unloading it from car. Outside.
	24 John Gibbons, .....	American,...	Driver, .....	18	S.	No. 4 shaft, .....	Luzerne,.....	Leg broken. Jumped from car and fell.



TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
April	7 A. J. Stone, .....	American, .....	Company laborer, ..	52	M.	{ Even washery, ... Hoyte, .....	{ Luzerne, .....	These four men were more or less burned or injured by an explosion of fuel ashes on the culm bank caused by burning water on the burning bank Outside. Arm broken. Kicked by his mule. Face and hands burned by gas. Toes crushed by coal falling on them.
	8 Lewis Briggs, .....	American, .....	Company laborer, ..	18	S.			
	7 Edward Swartwood, .....	American, .....	Company laborer, ..	40	M.			
	7 Bert Johnston, .....	American, .....	Company laborer, ..	20	S.			
	14 Frank Saltus, .....	Russian, .....	Driver, .....	33	S.			
	25 Joseph Griglock, .....	Russian, .....	Miner, .....	33	M.			
May	26 Michael Cubus, .....	Austrian, .....	Miner, .....	43	M.	{ Heidelberg No. 1 slope, Delaware, .....	{ Luzerne, .....	These men were burned on face and hands by gas. Nose broken and face cut by falling against the rib. Leg broken. Struck by trip of empty cars on slope. Back and hips bruised by fall of rock. Leg and hip bruised by fall of rock. Head cut and bruised. Struck by his door. Wrist broken. Hand caught in rocker arm of pump. Outside. Jaw bone broken. Kicked by his mule. Arm broken by falling on gangway road. He was running from a blast with a needle entered his abdomen. Head fell and the head cut and bruised. Struck by his door. Thrown by rope which caught in track. Leg broken by fall of roof while standing a prop. They went into an old abandoned breast and igniting gas, burning themselves on face and hands. Eye cut and face bruised by premature blast. Leg broken by car. Foot caught in branch of crossing.
	28 Charles Lacy, .....	Slavonian, .....	Miner, .....	39	M.			
	28 Andrew Gorlak, .....	Slavonian, .....	Laborer, .....	26	M.			
	28 Samuel Cofaras, .....	American, .....	Driver, .....	16	S.			
	15 Andrew Bohinskey, .....	American, .....	Slope headman, ..	19	S.			
	16 William Osman, .....	Polish, .....	Miner, .....	46	M.			
June	16 Stanley Swedeski, .....	Polish, .....	Laborer, .....	23	M.	{ Lafin shaft, .....	{ Luzerne, .....	Leg and hip bruised by fall of rock. Head cut and bruised. Struck by his door. Wrist broken. Hand caught in rocker arm of pump. Outside. Jaw bone broken. Kicked by his mule. Arm broken by falling on gangway road. He was running from a blast with a needle entered his abdomen. Head fell and the head cut and bruised. Struck by his door. Thrown by rope which caught in track. Leg broken by fall of roof while standing a prop. They went into an old abandoned breast and igniting gas, burning themselves on face and hands. Eye cut and face bruised by premature blast. Leg broken by car. Foot caught in branch of crossing.
	18 Martin Lawrence, .....	Polish, .....	Laborer, .....	25	S.			
	19 Timothy McAndrew, ..	American, .....	Engineer, .....	24	S.			
	20 Thomas Davis, .....	American, .....	Driver, .....	17	S.			
	27 Joseph Mitchell, .....	American, .....	Driver, .....	16	S.			
	28 Joseph Thomerunis, ..	Polish, .....	Miner, .....	45	M.			
July	30 David Griffith, .....	Welsh, .....	Doortender, .....	65	M.	{ Laurel Run, .....	{ Luzerne, .....	Leg and hip bruised by fall of rock. Head cut and bruised. Struck by his door. Thrown by rope which caught in track. Leg broken by fall of roof while standing a prop. They went into an old abandoned breast and igniting gas, burning themselves on face and hands. Eye cut and face bruised by premature blast. Leg broken by car. Foot caught in branch of crossing.
	5 Robert Eaton, .....	American, .....	Plane footman, ..	49	M.			
	9 John Leona, .....	Italian, .....	Miner, .....	45	S.			
	10 Abe Danno, .....	Italian, .....	Laborer, .....	26	M.			
	10 Rafael Olardo, .....	Italian, .....	Miner, .....	32	M.			
	12 Paul Bontenya, .....	Italian, .....	Miner, .....	26	S.			
13	Martin Button, .....	American, .....	Driver, .....	18	S.			

July	27	Charles Trevettian, ..	American,....	Company laborer, ..	23	S. Laurel Run, .....	Luzerne,.....	Leg broken by the collapse of an old trestle. Outside.
	27	James Matthews, .....	Welsh,.....	Company laborer, ..	33	Laurel Run, .....	Luzerne,.....	Cut and bruised by the fall of the trestle mentioned above.
Aug.	9	Andrew O'Malley, ..	Irish,.....	Miner, .....	46	No. 11 shaft, .....	Luzerne,.....	Face and hands burned by gas in cross-
	16	Michael Martin, .....	Irish,.....	Runner, .....	27	No. 14 shaft, .....	Luzerne,.....	Back bruised. Caught by trip of cars on plane.
	27	Leo Leskis, .....	Russian,....	Miner, .....	25	Laurel Run, .....	Luzerne,.....	Neck and hands burned by gas.
	30	Anglo Darso, .....	Italian,....	Miner, .....	37	No. 5 shaft, .....	Luzerne,.....	Face and hands burned on face and hands by an explosion of gas. While working
Sept.	6	Henry Jenkins, .....	American,....	Miner, .....	33	M. {	Luzerne,.....	In an air shaft with safety lamps Yau-
	6	James McNulty, .....	Polish,....	Miner, .....	42	No. 14 tunnel, ...	Luzerne,.....	chuck struck a match and ignited the gas.
	6	Joseph Yauchuck, ..	Polish,....	Laborer, .....	27	S. {	Luzerne,.....	Hip cut and bruised by dynamite caps exploding in his pocket.
	7	Thomas Smith, .....	Polish,....	Miner, .....	32	M. Ladin shaft, .....	Luzerne,.....	Arm cut and face burned by gas.
	11	John Mallins, .....	Italian,....	Miner, .....	25	S. No. 14 shaft, .....	Luzerne,.....	These men were working on night shift and were severely burned about the face
	19	Thomas Sells, .....	Italian,....	Miner, .....	30	M. {	Luzerne,.....	and hands by an explosion of gas
	19	Samuel Rizzo, .....	Italian,....	Miner, .....	32	M. No. 11 shaft, .....	Luzerne,.....	caused by Rizzo, the driver, blocking the ventilating door open.
	19	Ralph Petral, .....	Italian,....	Miner, .....	43	M. Pine Ridge shaft, ..	Luzerne,.....	Leg broken by fall of fire clay roof.
Oct.	2	Anthony Drohowig, ...	Russian,....	Miner, .....	60	M. No. 8 shaft, .....	Luzerne,.....	Ribs broken by fall of rock at face of mine.
	2	Martin Earley, .....	Irish,.....	Miner, .....	20	S. {	Luzerne,.....	Shoulder fractured and nose broken by flying
	3	Joseph Itusmar, .....	Polish,....	Laborer, .....	20	S. Heidelberg No. 1 slope, ..	Luzerne,.....	Shot from blast. Caught between car
	5	John Grazil, .....	Italian,....	Miner, .....	23	S. {	Luzerne,.....	bumpers.
	7	William Keats, .....	English,....	Machinist, .....	43	M. Pine Ridge shaft, ..	Luzerne,.....	Hand painfully crushed by rock falling on it.
	10	Joseph Patrick, .....	Polish,....	Miner, .....	43	M. Coal Brook, .....	Luzerne,.....	Ankle broken by rock falling from gob on him.
	15	Alx Kearney, .....	American,....	Motor engineer, ...	29	M. No. 11 shaft, .....	Luzerne,.....	Shoulder dislocated and ribs broken by motor leaving the track.
	17	Eugene Brady, .....	American,....	Shot-packer, .....	14	S. No. 8 breaker ...	Luzerne,.....	Legs broken. His clothing caught on line shafting.
	20	Robert Munstoor, .....	Irish,.....	Laborer, .....	42	M. No. 7 shaft, .....	Luzerne,.....	Wrist painfully sprained. Caught on bunting of shaft.
	23	Frank Rustic, .....	American,....	Driver, .....	17	S. Pine Ridge shaft, ..	Luzerne,.....	Hips squeezed by car while putting it on truck.
Nov.	12	Costie Chordie, .....	Polish,....	Laborer, .....	27	M. No. 14 shaft, .....	Luzerne,.....	Ear cut off. Struck by piece of coal falling from roof.
	20	William Lynch, .....	American,....	Driver, .....	13	S. No. 14 shaft, .....	Luzerne,.....	Thigh broken by car while sitting on bumper.
	22	William Munslie, .....	American,....	Runner, .....	31	S. Even breaker, ...	Luzerne,.....	Hand painfully bruised while spranging car wheel.
	23	Peter Loguskey, .....	Russian,....	Car loader, .....	25	M. No. 14 breaker, ...	Luzerne,.....	Hand cut and bruised by railroad car.
Dec.	6	Emory Kurzova, .....	Hungarian,...	Miner, .....	35	M. Laurel Run, .....	Luzerne,.....	Face and hands bruised by coal flying from blast he was firing.
	12	Angelo Furtese, .....	Italian,....	Company laborer, ...	32	M. {	Luzerne,.....	Face and hands burned while throwing
	12	Joseph Mosley, .....	Italian,....	Company laborer, ...	30	M. {	Luzerne,.....	water on fire on culm bank.
	17	Frank Bosva, .....	Russian,....	Trackman, .....	46	M. {	Luzerne,.....	Leg broken by frozen dirt falling on him. Outside.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

March 10, Ridgewood Colliery, Joseph Jastremski, Polish, miner, was instantly killed by fall of rock. He fired a blast which knocked out two props.

June 23, Number 10 Shaft, Peter Ristova, Italian, miner, was fatally injured by fall of middle rock. Died same day.

July 7, Hoyte Shaft, Sebastian Millon, Austrian, laborer, was killed by fall of middle rock while shoveling coal.

July 7, Pine Ridge Colliery, John J. Walsh, American, miner, was fatally injured by fall of roof. Died after being taken home.

July 10, Number 8 Colliery, Richard Hurry, American, laborer, was instantly killed by fall of rock. Died August 7.

July 28, Number 14 Colliery, Lawrence Waduskie, Slavonian, laborer, was fatally injured by fall of rock. Died August 7.

August 27, Ewen Colliery, Guitan Musto, Italian, miner, was instantly killed by fall of rock in Number 4 shaft.

August 30, Number 14 Colliery, Dominick Santena, Italian, miner, was fatally injured by fall of top rock while tamping a hole in No 14 tunnel. Died same day.

September 7, Laffin Colliery, Michael Gallagher, American, laborer, was instantly killed on gangway road by fall of coal, while bailing water.

October 16, Number 10 Colliery, John T. Scott, American, charge-man, was instantly killed by fall of rock. He told the laborer to pull it down and it fell on him.

October 16, Butler Colliery, Wardrick Samara, Italian, miner, was instantly killed by fall of roof while drawing out pillars.

October 26, Ridgewood Colliery, Santi Nick, Italian, miner, was instantly killed by fall of rock. He told the laborer to pull it down and it fell on him.

November 7, Number 14 Colliery, John Lois, Polish, laborer, was killed by fall of rock and rider coal.

December 4, Pine Ridge Colliery, Joseph Krool, Austrian, laborer, was instantly killed by fall of top coal.

## Cars

February 27, Laffin Colliery, Joseph Eckertt, American, driver, was fatally injured by falling under trip of loaded cars. Died same day.

March 3, Pine Ridge Colliery, Joseph Popko, Polish, miner, was instantly killed at face of breast by an empty car run down grade by the runner. Popko did not get out of the way.

November 12, Ridgewood Colliery, Luke Sterka, Austrian, miner, was fatally injured while trying to hold a loaded car of rock, by falling in front of it. Died November 14, in hospital.

December 12, Number 14 Colliery, James Walker, Scotch, driver, was fatally injured while unhitching a mule from cars. He was caught between the bumpers. Died same day, outside.

### Explosion of Gas

January 15, Number 14 Colliery, Michael Noone and Thomas O'Brien, American, miners, were fatally burned by an explosion of gas, caused by a door on gangway being left open too long by the driver. Noone and O'Brien died January 21.

### Explosions of Powder and Dynamite

January 23, Number 10 Colliery, Anthony Rizovitch, Lithuanian, laborer, was fatally burned by powder while putting a cotton in his lamp at the miners' box. Died January 30.

January 25, Number 14 Colliery, John Armstrong, American, miner, was fatally burned by igniting with his lamp a cartridge of powder that he had prepared. Died February 4.

November 24, Laflin Colliery, Patrick Pants, Italian, miner, was fatally burned by igniting with his lamp a stick of dynamite that exploded while he was thawing it by the blaze of his lamp. Died December 18.

### Premature Blasts

February 22, Laflin Colliery, Felix Deshelsky, Polish, miner, was fatally injured by explosion of powder while tamping a hole. Died February 28.

June 23, Clarence Colliery, Renaldo Bydzari, Italian, miner, was instantly killed while forcing a cartridge of powder in the drill hole.

September 26, Ridgewood Colliery, Michael Price, American, miner, was instantly killed by the blast that he was firing, blowing through the pillar in the gangway where he was standing.

October 16, Number 6 Colliery, Michael Montanto, Italian, miner, was fatally injured by a blast he was firing. He failed to reach a place of safety and was struck by the flying coal. Died same day.

### Falling Down Shafts

May 22, Pine Ridge Colliery, John Kopic, Polish, laborer, was instantly killed at 3 P. M. while descending the shaft on cage to work. It is not known how he fell off the cage as he was the only person on it at the time.

### Mules

November 15, Delaware Colliery, Charles Groth, German, driver, was fatally injured by being kicked by a mule on the gangway road as he was passing it. Died November 16.

### Machinery

November 15, Butler Colliery, Andrew Sulcan, Polish, slatepicker, was fatally injured by his leg being caught between the timber which holds the pillar block and pinion wheel of pony rolls. He died the same night.

### Suffocation

February 5, Pine Ridge Breaker, James Boylan, American, slatepicker, was smothered in rice coal chute by being drawn down with the coal.



March 9, Number 8 Washery, Michael Sabbott, Italian, culmman, was smothered by a rush of culm on the bank.

March 9, Number 14 Colliery, Joseph Sarnella, Italian, and John Russian, Polish, ashmen, were asphyxiated while loading a car with ashes under the boiler room. Outside.

### Miscellaneous, Outside

April 7, Ewen Washery, Isaac Weil, Hebrew, and Michael Marwell, Italian, company laborers, were fatally burned by an explosion of steam and hot coal on culm bank, caused by throwing water on burning bank from a hose. Weil died April 11. Marwell died April 17.

July 27, Laurel Run, George Yale, American, and John Geary, American, company men, were fatally injured while taking down the old trestle-work to breaker. The trestle fell and the men fell with it. Geary died July 28. Yale died August 2.

December 11, Number 14 Colliery, Sanford Apt, machinist, was instantly killed by throwing himself into the shaft from the surface landing. He came to the head of the shaft and opened the gate. The head tender, John Jordan, who was oiling the opposite cage, ordered him away. He took hold of Apt, put him outside of the gates, and returned to his work. Looking over in the distance of the opening he saw Apt in the act of throwing himself into the shaft. This is not considered by the Inspector as chargeable to coal mining. It was a case of suicide.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

### PENNSYLVANIA COAL COMPANY

Number 14 Colliery.—At Number 14 Breaker the washery was enlarged by an addition of 12 feet by 92 feet, and they are now making buckwheat coal in the washery instead of the breaker. A brick addition enlarging the wash house 18 feet by 30 feet was built.

An 8 inch bore hole was drilled from the surface to Pittston vein for slushing purposes.

The old Chapman slope abandoned for many years has been opened up the Hillman, from which the company expects to withdraw the pillars in the near future. An 8 inch x 16 inch self-contained engine and boiler has been installed to hoist the coal.

At Number 14 tunnel a new set of B. and W. boilers, 200 horse power, has been installed, and the boiler house enlarged 28 feet x 50 feet.

A new air shaft 12x12 feet was sunk from the surface to Marcy vein, a distance of 41 feet, with a 20 foot diameter Guibal fan placed therein for ventilation. Condition of colliery is good.

A new opening called the Cartright Slope is in course of sinking half a mile south of No. 14 Shaft in Plainsville, to tap the Diamond vein; a pair of 15x36 inch engines has been installed to hoist the coal, and a brick boiler house, 56x86 feet, was built in which was placed three boilers of 250 horse power of the locomotive type.

A new air shaft 12x12 feet was sunk 117 feet from the surface to the Diamond vein, and a 20 foot Guibal fan is in course of erection.



Number 6 Colliery.—In Number 6 Shaft a new brick car and blacksmith shop was built 30x90 feet; also a new brick wash house 17x17 feet.

A tunnel from Clark vein, Number 6 Shaft, to the Babylon vein, in Number 5 shaft, was completed. This will bring all coal to the same foot. Condition of colliery and ventilation fair; drainage bad.

Number 11 Shaft.—A steam plane was driven from the Babylon to the 14 foot vein to the Laffin basin. This will shorten the distance of transportation of coal over one mile.

A ventilating shaft was sunk from the Babylon to Red Ash vein on south pitch. Condition of colliery, fair.

Number 5 Shaft.—No improvements. Condition of colliery, fair.

Ewen Colliery.—A large washery was erected with a daily capacity of 1,600 tons. It is completed with modern machinery for cleaning the culm from the bank.

Number 4 Shaft.—A new steel tower was erected over the hoisting shaft. A new engine and pump house 41x20 feet was built, also a blacksmith, oil and wash house, 48x17 feet, of brick. A rock tunnel was driven from the Marcy to the 14 foot vein to recover the pillars in the old Number 2 Shaft. Condition of colliery, good.

Hoyte Shaft.—A new steel hoisting tower was erected over this shaft 80 feet in height; a new engine and compressor house was built of brick. A rock slope was also driven from the 14 foot to Marcy vein. This slope will reach the coal in Marcy vein, that otherwise could not be reached. Condition of colliery, good.

Number 10 Colliery.—A new breaker and washery was built situated between Number 10 and Number 8 colliery, which will take and prepare the coal from Numbers 1, 8, 9, 10 and 10, Jr., Shafts. It is equipped with all the most modern improvements and has a capacity of 5,000 tons per day.

The coal is carried to the top of breaker by inclined over-lapping open top bucket steel conveyor, which is operated by 185 horse power 250 volt compound wound motor, reciprocating feed on conveyor driven by 10 H. P. 250 volt compound wound motor. The breaker and washery is equipped with mechanical pickers and nine L. V. figs.

Both buildings are heated by exhaust steam. The engines are the Pennsylvania Coal Company pattern, 18x36 inches, in pairs. A brick building 50x160 feet was built for car and machine shops and is equipped with three lathes, planer, drill press, shaping machines operated by steam.

New mine scales and building erected at foot of conveyor for weighing mine cars. A new track scales for both light and loaded cars have been installed by Barker and Son, Scranton, Pa.

The power house is built of brick 34x74 feet with four engine type direct current compound generators 215 K. W. capacity, four 18x20 inch automatic McEwen engines. This electric power will be carried to Barnum Colliery, Number 1 and Number 10 shafts, and will operate a part of the breaker.

The boiler house is built of brick 76x113 feet, with an addition of 40x33 feet. The boilers are of the Sterling maxim type, consisting of 2,400 H. P. Equipment for boiler plant will be one 4,500 H. P. feed water heater, two 16x10x18 inch Scranton duplex plunger end packed pumps.

McClaves latest improved shaking grates with underground tracks for handling ashes.

Steam locomotives will be used to transport all the coal from Number 1 and Number 10, Sr., Shafts to the new Number 9 breaker, as it will be named.

Number 9 Shaft will be abandoned as a hoisting shaft and all coal from Number 9 will be hoisted up Number 10. Number 8 Shaft will also be abandoned and all coal will be hoisted up Number 1 Shaft.

Number 1 Shaft.—The following improvements have been made: Rock tunnel from surface to Number 1 Shaft, at which landing coal is hoisted instead of taking to the surface.

Rock slope from this landing to Checker vein pillars, this coal being hauled by engine on surface to the same landing.

In Marcy vein a rock tunnel from the Marcy to the Clark vein. This coal to be taken to the Marcy vein of Number 1 Shaft.

In Bottom or Red Ash vein a rock plane to the Babylon or Top Split of Red Ash. This coal dropped to Bottom vein by engine on surface.

Arrangements made for all coal now hoisted at Number 8 Shaft to come to Number 1 Shaft, the former to be abandoned.

Number 1 Shaft supplied with 22x36 inch first motion engines, piston valve, Exeter make.

In the Marcy vein, a rope haulage engine 18x24 inch, and in the Bottom vein a rope haulage engine 18x24 inch, both to haul coal from west end of property under Pittston and to land the coal at foot of shaft. There is also an engine 16x18 inch in Bottom vein for engine plane to drop coal from hill to foot of shaft, abolishing five balance planes.

Four 7½ ton electric motors in this shaft, two in Marcy vein and two in Bottom vein.

Steam locomotives will be used to transport the coal from Number 1 Shaft to Number 9 Breaker.

Number 10 Shafts, Jr., and Sr.—Number 9 Shaft abandoned. Number 10 Shaft, Sr., re-cribbed with concrete, widened out three feet and re-timbered from top to bottom of shaft.

Steel tower erected for Number 10, Jr., and Number 10, Sr., with steel approaches. The coal hoisted to an elevation high enough to be hauled to Number 9 Breaker by steam locomotives. The new tramway from both shafts goes to Number 9 Breaker across Parsonage Street by steel plate girder bridge.

At Number 10, Jr., the old engines have been replaced by 22x36 inch first motion engines that will hoist coal from the Bottom vein only. The Number 10, Sr., to hoist coal from the Marcy, Big and Checker veins. New steel cages to be used in these Shafts.

Engine houses for both shafts have been made of brick and in engine room at Number 10 Shaft, Sr., is erected duplex compound condensing Jeaneville pump 16 inch and 30x14x48 inch for pumping water to new Number 9 Washery.

Inside Number 10, Sr., a rock tunnel loop has been made around the shaft to handle empty cars, and electric haulage extended throughout all the workings. Rope haulage engines 16x18 inches installed to haul all Marcy vein coal below shaft level by way of new slope just completed.

In both of these shafts electric motors, about six in number are used for transportation on main roads. Condition of colliery, good.

#### FIRE IN NUMBER 7 SHAFT, PENNSYLVANIA COAL COMPANY

On the morning of December 3, a fire was discovered in Number 7 Shaft 14 Foot vein west level heading, on south pitch in chambers, just inside of Marcy vein tunnel. After fighting the fire with hose, etc., for a few days, it was decided to build dams and flood the workings with water from bore holes going down on highest point above the fire. The dams were started on December 9, and finished December 13, about 100,000 bricks having been used. The first bore hole was started December 11, the second December 13, and both were finished in 5 days, working two shifts of 10 hours each.

On December 28 when pressure was  $21\frac{3}{4}$  pounds, it was decided to strengthen the dams, which was done by timbering and lagging and filling in between pillars and lagging with  $2\frac{1}{2}$  feet of concrete. The depth of the bore holes was 247 and 248 feet, respectively. Highest pressure on dams was reached January 8, at 2 A. M. with 65 pounds pressure to the square inch.

On January 12, 1907, at noon, it was decided to make an opening in one of the dams to ascertain if the fire was out. On January 14, a hole had been broken through the wall and an investigation made and declared that the fire was out.

Condition of the colliery, good.

#### LEHIGH VALLEY COAL COMPANY

Mineral Spring Colliery.—Additional machinery was placed in Breaker consisting of new elevator conveyor lines, mechanical pickers, etc., to handle culm bank coal in reclaiming banks on west side of breaker.

New standard fence complete around the property.

Number 35 Tunnel finished through Coal Brook anticlinal.

Number 32 Tunnel finished through Mineral Spring anticlinal.

Numbers 38 and 39 Tunnels also finished through such anticlinal.

A pair of 20x30 inch second motion friction drum hoist engines are being installed on surface in concrete brick house for Number 8 Inside Slope Red Ash vein, rope passing through 6 inch cased bore hole.

A new brick-concrete washhouse completed at Coal Brook.

A new brick-concrete washhouse completed at Mineral Spring.

A new brick supply house and blacksmith shop completed at Coal Brook.

Silting has been extensively carried on throughout the year in the Baltimore and Checker veins Mineral Spring. Condition of colliery, good.

Heidelberg Number 1 Colliery.—Inside. A 4,500 foot engine plane was driven and graded for economical transportation in Red Ash vein.

A 1,400 foot gravity plane was installed in Marcy vein, to which a new tunnel, 370 feet, was driven to Clark vein as a tributary. A 45 foot air shaft acting as second opening was also completed.

The ventilation of the Marcy and Clark veins was improved by an air shaft from the surface.

Robbing was extensively carried on in Red Ash vein.



Heidelberg Number 2 Colliery.—Extensive repairs were made in breaker during the year.

Robbing of Red Ash vein was extensively carried out.

Silting of a portion of Red Ash vein under the Delaware and Hudson Railroad tracks was completed.

#### HILLSIDE COAL AND IRON COMPANY

Number 1 Slope in Thomas Shaft has been driven on the Middle Split of the Red Ash vein from the shaft level toward the basin, a distance of about 600 feet; area 6x16 feet. This Slope is continued as a steam plane to the top split of the Red Ash through the dividing rock, and has been driven a distance of about 300 feet. After entering the top split, the same engines will also serve on a continuation of the plane driven toward the basin as a slope in the top split, which will be driven as far as the coal can be worked.

These engines will therefore handle the coal in the Bottom Red Ash Slope and on the Power Plane Slope in the top split of the Red Ash. The Number 1 Power Plane in the middle split of the Red Ash has been extended a distance of about 350 feet; area, 6x14 feet. Condition, good.

Fernwood Colliery.—A washery 40x60x76 feet high has been built to wash out the Fernwood culm dump.

A power house built of brick 35x35x16 feet, and one 150 K. W. 275 to 300 volt electric generator, with 19x18 inch Ewen engines have been installed, and three  $7\frac{1}{2}$  ton electric motors in Number 1 Slope. Condition of colliery, good.

Clarence Colliery.—The Number 1 Slope has been extended 106 yards during the year, area 6x12 feet, and the Number 2 Slope 79 2-3 yards, area 6x12 feet. Condition of colliery, good.

#### HUDSON COAL COMPANY

Lafin Colliery.—New trestle from plane to breaker to replace one blown down by storm, new blacksmith and carpenter shop, locomotive house and supply house.

Number 5 Slope Bottom Red Ash, driven 600 feet.

Number 3 Plane driven 100 feet in rock from bottom to top split Red Ash and continued in vein 150 feet.

Number 6 Slope opened and driven 100 feet.

Condition of colliery, good.

Pine Ridge Colliery.—Number 13 Slope driven through rock from Hillman to Rock vein a distance of 250 feet, and continued in Rock vein a distance of 550 feet.

An 8 inch bore hole was put down 102 feet for rope for Number 13 Slope.

Number 14 Slope in Kidney vein extended 100 feet and completed, Number 15 Slope in Hillman vein extended 200 feet.

Number 16 Slope in Rock vein opened and driven 425 feet. A 22 inch bore hole was sunk for the purpose of pumping through to the surface from Checker vein, a distance of 464 feet.

A 6 inch bore hole sunk 146 feet to Hillman vein for flushing purposes.

A 6 inch bore hole sunk 203 feet to Rock vein for flushing purposes, Condition of colliery, fair.

Laurel Run.—Number 11 tunnel extended 450 feet to bottom split of Red Ash. Haulage road toward Pine Ridge driven 1,275 feet. Condition of colliery, good.

#### DELAWARE AND HUDSON COMPANY

Delaware Shaft.—New steel tower erected over main shaft to take place of frame structure. Condition of colliery, good.

#### TRADERS' COAL COMPANY

Ridgewood Slope.—Condition of colliery, good.

#### Mine Foremen's Examination

The examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen, was held on the 19th and 20th of June, at Pittston.

The Board of Examiners was H. McDonald, Inspector of Mines, James McCarty, Superintendent, John J. Morahan and David P. Williams, miners.

The following applicants were recommended for certificates:

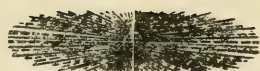
#### Mine Foremen

William H. Muir, Edgar C. Weichel, William Jeffery, Walter J. Hutchings, John Richardson, Patrick Durkin, George Parry, Michael Houston, Albert A. Carey, Samuel Harrison, F. G. Wilcox, E. F. Lewis, James C. Johnston, Charles Johnston, Charles B. Smith, William Moore and Michael Connors, of Avoca; William Fowler, John Henighen, Benjamin J. George, F. W. Campbell, Patrick J. Hopkins and John E. Davis, of Pittston; Charles Pyne, Reese Bennett, Wyoming; Evan Fulton, Edwardsville and Morgan Mainwaring, Dupont.

#### Assistant Mine Foremen

George Steel, Michael Price, James Thompson, Daniel R. Jones, Pittston; George P. Kearney, John Killeen, Inkerman, William Llwelllyn, William Branch, Wilkes-Barre; Henry R. Kettle, H. B. Bittenbender, Plymouth; Samuel Prichard, Edwin Jones, Edwardsville; John Vinton, John Harris, Plains; Thomas Hughes, Parsons and David Thomas, Avoca.





## Seventh District

LUZERNE COUNTY

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Wilkes-Barre, Pa., February 20, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report for the year ending December 31, 1906.

The changes made in this district at the beginning of the year were as follows:

Collieries taken from District: Sugar Notch, Numbers 5, 6 and 7, of the Susquehanna Coal Company; Warrior Run, Auchincloss, Bliss, Truesdale, Alden and Hadleigh.

Collieries added to District: Prospect, Baltimore Number 5, Baltimore Tunnel and Healey.

Respectfully submitted,

JAMES MARTIN,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	13
Number of mines, .....	36
Number of mines in operation, .....	36
Number of tons of coal shipped to market, .....	3,141,186
Number of tons used at mines for steam and heat, .....	393,040
Number of tons sold to local trade and used by employes, .....	188,219
Number of tons produced, .....	3,722,445
Number of persons employed inside of mines, .....	6,239
Number of persons employed outside, .....	2,413
Number of fatal accidents inside of mines, .....	31
Number of fatal accidents outside, .....	6
Number of non-fatal accidents inside of mines, .....	88
Number of non-fatal accidents outside, .....	12
Number of tons of coal produced per fatal accident inside, .....	120,079
Number of persons employed per fatal accident inside, ..	201
Number of persons employed per fatal accident outside, ..	402
Number of persons employed per non-fatal accident inside, .....	71
Number of persons employed per non-fatal accident outside, .....	201
Number of wives made widows, .....	17
Number of children orphaned, .....	35
Number of steam locomotives used outside, .....	25
Number of compressed air locomotives used inside, .....	2
Number of electric motors used inside, .....	4
Number of electric motors used outside, .....	2
Number of fans in use, .....	42
Number of gaseous mines in operation, .....	34
Number of non-gaseous mines in operation, .....	2
Number of new mines opened, .....	2

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company, .....	1,455,640
Lehigh Valley Coal Company, .....	1,435,628
Delaware and Hudson Company, .....	614,382
Red Ash Coal Company, .....	168,830
Wilkes-Barre and Scranton Coal and Iron Company, ....	39,500
Miners' Mills Coal Mining Company, .....	8,465
Total, .....	<u>3,722,445</u>

## Production by Counties

Luzerne, .....	<u>3,722,445</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Fatal Accidents		Total	Non-fatal Accidents		Total									
	Inside	Outside		Inside	Outside										
Lehigh and Wilkes-Barre Coal Co., .....	10	4	14	30	5	35	145,564	48,521	2,724	853	3,577	272	213	91	171
Lehigh Valley Coal Co., .....	15	2	17	39	3	42	95,709	36,811	2,174	786	2,960	146	393	56	262
Delaware and Hudson Co., .....	6	.....	6	14	2	16	122,876	43,884	1,004	436	1,440	201	.....	72	218
Red Ash Coal Co., .....	.....	.....	.....	3	2	5	56,277	56,277	217	269	486	.....	.....	72	135
Wilkes-Barre and Scranton Coal and Iron Co., .....	.....	.....	.....	1	.....	1	39,500	39,500	89	51	140	.....	.....	89	.....
Miners' Mills Coal Mining Co., .....	1	.....	1	1	.....	1	8,465	8,465	31	18	49	31	.....	31	.....
Totals and averages for district, .....	31	6	37	88	12	100	120,079	42,301	6,239	2,413	8,652	201	402	71	201



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, .....	1					1	1			1			4	12.90
Falls of slate, .....							1					1	2	6.45
Falls of roof, .....		1	2						1	2		1	6	29.03
Mine cars, .....			1				1	1		1	1		5	16.13
Explosions of gas and dust, .....			2							1			3	9.68
Explosions of powder and dynamite, .....						2		1	2			1	6	12.90
Premature blasts, .....			1										3	9.68
Miscellaneous, .....							1						1	3.23
Totals, .....	1	1	6			3	6	2	3	5	1	3	31	100.00
Causes of Accidents Outside														
Cars, .....	1		1		1		1						4	66.66
Machinery, .....	1												1	16.67
Miscellaneous, .....										1			1	16.67
Totals, .....	2		1		1		1		1				6	100.00
Grand totals inside and outside, .....	3	1	7		1	3	6	3	3	6	1	3	37	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....	1	1					3		1	1	1		8	9.09
Falls of slate, .....	1	2											1	1.14
Falls of roof, .....	1	3	2		1	4	1	2	3	1	3	1	10	11.36
Mine cars, .....	6	3						3	2	1			25	28.41
Explosions of gas and dust, .....		3				5	2	1		7		1	19	21.69
Explosions of powder and dynamite, .....		3	1										6	6.82
Premature blasts, .....	3	4				1		1	1				10	11.36
Falling into shafts, .....	1												1	1.14
By mules, .....	1								1				1	1.14
Machinery, .....	1									1			1	1.14
Miscellaneous, .....	1						1	2			1	1	6	6.81
Totals, .....	13	16	3		1	12	7	9	6	13	5	3	58	100.00
Causes of Accidents Outside														
Cars, .....						1			1		1	1	4	33.33
Machinery, .....	1				1			1					3	25.00
Miscellaneous, .....			1					1	2	1			5	41.67
Totals, ..	1		1		1	1		2	3	1	1	1	12	100.00
Grand totals inside and outside, .....	14	16	4		2	13	7	11	9	14	6	4	100	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Miners, .....			4				3			1		1
Miners' laborers, .....	1	1	2			3	1	1	2	3		2
Drivers and runners, .....							1	1	1		1	
Doorboys and helpers, .....							1					
All other employees, .....										1		
Totals, .....	1	1	6			3	6	2	3	5	1	3
<b>Outside</b>												
All other employees, .....	2		1		1			1		1		
Totals, .....	2		1		1			1		1		
Grand totals inside and outside, .....	3	1	7		1	3	6	3	3	6	1	3

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Mine foremen, .....										1		
Miners, .....	1	2	1			3	2	2	2			1
Miners' laborers, .....	1	3	1		1	2	3	1	2	2	1	2
Drivers and runners, .....	3	3				2	2	2	1	1	2	
Doorboys and helpers, .....	1		1			1			2			
Pumpmen, .....							1					
Company men, .....	1					4	1	4	1	3	2	
Totals, .....	13	16	3		1	12	7	9	6	13	5	3
<b>Outside</b>												
Blacksmiths and carpenters, .....								1				
Engineers and firemen, .....									1			
Statepickers (boys), .....	1					1				1	1	
All other employees, .....		1					1	2			1	
Totals, .....	1		1		1	1		2	3	1	1	1
Grand totals inside and outside, .....	14	16	4		2	13	7	11	9	14	7	4

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	..	2	..	1	1	1	1	2	..	1	..	9
Welsh, .....	..	..	1	..	..	..	..	..	..	..	..	..	2
Irish, .....	..	..	1	..	..	..	..	..	..	1	..	..	1
German, .....	1	..	..	..	..	..	..	..	..	..	..	..	1
Polish, .....	1	..	2	..	..	1	3	1	1	2	..	2	13
Slavonian, .....	..	1	..	..	..	..	..	..	..	..	..	..	1
Lithuanian, .....	..	..	..	..	..	1	2	1	..	2	..	..	6
Russian, .....	..	..	1	..	..	..	..	..	..	1	..	1	3
Totals, .....	3	1	7	..	1	3	6	3	3	6	1	3	37

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	3	1	3	..	..	1	1	2	4	2	1	..	18
English, .....	..	..	..	..	..	1	1	1	1	1	1	..	4
Welsh, .....	4	2	..	..	1	1	1	1	1	1	..	..	12
Irish, .....	..	2	..	..	..	2	1	1	..	2	..	..	6
German, .....	..	2	..	..	..	..	..	..	..	..	..	..	2
Polish, .....	5	2	1	..	..	1	3	2	2	2	..	1	25
Slavonian, .....	1	2	..	..	1	3	..	2	2	2	..	2	18
Lithuanian, .....	1	..	..	..	..	1	1	..	3	2	..	..	8
Austrian, .....	..	..	..	..	..	..	..	1	..	..	..	..	1
Russian, .....	..	1	..	..	..	3	..	1	..	..	1	..	6
Totals, .....	14	16	4	..	2	13	7	11	9	14	6	4	100

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed in-side	Average number of cubic feet per minute provided for each person	
Lehigh and Wilkes-Barre Coal Co.																	
Hollenback Colliery—																	
Hollenback No. 2, .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.6	8.9	48	1.25	} Guibal, ...	Steam, ...	10	318,750	288,420	322,400	502	575	
Hollenback No. 3, .....	Slope, .....	Gaseous, .....	2 fans, {	35	11.9	8.9	48	1.25									
Hollenback No. 2,* .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.9	8.9	45	2									
Hollenback No. 3,* .....	Slope, .....	Gaseous, .....	2 fans, {	24	7.11	6.0	45	2									
South Wilkes-Barre Colliery—																	
Number 1, .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.9	8.9	45	2	} Guibal, ...	Steam, ...	18	365,000	290,200	422,900	350	829	
Number 3,* .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.9	8.9	45	2									
Number 5, .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.9	8.9	45	2									
Number 5,* .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.9	8.9	45	2									
Stanton Colliery—																	
Stanton No. 7, .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.7	8.9	46	1.9	} Guibal, ...	Steam, ...	11	192,350	126,480	175,345	510	248	
Abbott, .....	Slope, .....	Gaseous, .....	Fan, .....	20	11.9	8.4	60	1.5									
Empire, .....	Shaft, .....	Gaseous, .....		24	8.0	6.0	62	1.6	Guibal, .....		7	105,100	81,400	112,800	120	678	
Maxwell Colliery—																	
Baltimore, .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.9	8.9	40	1.5	} Guibal, ...	Steam, ...	20	386,500	361,560	410,320	664	544	
Red Ash, .....	Shaft, .....	Gaseous, .....	2 fans, {	35	11.9	8.9	40	1.5									
Hillman, .....	Slope, .....	Gaseous, .....	2 fans, {	25	8.2	6.3	40	1.5									
Baltimore,* .....	Shaft, .....	Gaseous, .....	2 fans, {	25	8.2	6.3	40	1.5									
Red Ash,* .....	Shaft, .....	Gaseous, .....	2 fans, {	24	8	6	40	1.5	Guibal, ...		20	386,500	361,560	410,320	664	544	
Hillman, .....	Slope, .....	Gaseous, .....	2 fans, {	24	8	6	40	1.5	Guibal, ...		20	386,500	361,560	410,320	664	544	

\*Emergency fan.

## Lehigh Valley Coal Co.

## Prospect Colliery—

Prospect, .....	Shaft,...	Gaseous,	2 fans,...	30	9	8	50	1.8	Guibal,....	Steam,....	69,102	67,835	71,193	81	838
Oakwood, .....	Shaft,....	Gaseous,	Fan,....	30	9	8	60	1.6			96,110	74,100	112,600	266	279
Mokvale, .....	Slope,....	Gaseous,	Fan,....	20	6.6	5.3	66	1.4			89,265	82,570	95,505	168	491
Hillman, .....	Slope,....	Gaseous,	2 fans,...	15	4.6	3.8	80	1			58,127	54,404	69,247	108	503
Wyoming, .....	Shaft,....	Gaseous,	Fan,....	25	7	6	50	1			92,590	84,670	102,330	151	560
Henry, .....	Shaft,....	Gaseous,	2 fans,...	30	10	8	50	1.5			128,569	131,472	149	477	
Henry Red Ash, .....	Shaft,....	Gaseous,	Fan,....	28	6.6	7.6	37	.9			99,544	90,782	107,164	104	873

## Dorance Colliery—

Baltimore, .....	Shaft,....	Gaseous,	Fan,....	35	12	10.2	47	2	Guibal,....	Steam, ...	156,657	125,967	190,295	268	473
Hillman, .....	Shaft,....	Gaseous,	Fan,....	30	10	8	59	2	Guibal,....	Steam, ...	174,180	110,710	135,500	239	463

## Franklin Colliery—

Rock, .....	Slope,....	Gaseous,	2 fans, {	20	0.0	5.9	75	1	Guibal,....	Steam, ...	112,400	74,700	121,600	252	296
Long, .....	Slope,....	Gaseous,	2 fans, {	15	4.6	4.6	30	.8	Guibal,....	Steam, ...	41,500	22,100	47,900	63	331
Long, .....	Slope,....	Gaseous,	Fans,...	15	4.6	4.6	30	.8	Guibal,....	Steam, ...	36,400	24,900	39,600	105	237
Sum, .....	Slope,....	Gaseous,	Fans,...	15	6	3.9	75	.8							
Franklin, .....	Tunnel,...	Non-gas,	Natural, .....												

## Delaware and Hudson Co.

Baltimore Colliery—															
Baltimore, .....	Tunnel,...	Gaseous,	2 fans, {	13	6	5	65	1.1	Guibal,....	Steam, ...	139,000	102,000	159,000	243	419
				17.5	5.3	4.8	68	2.2							

## Number 5 Colliery—

Number 5, .....	Shaft,....	Gaseous,	2 fans,...	17.5	5.3	4.8	60	2.4	Guibal,....	Steam, ...	168,780	148,900	200,800	190	784
Number 2, .....	Shaft,....	Gaseous,	2 fans,...	23	7	5.6	50	1.8	Guibal,....	Steam, ...	110,000	98,790	119,910	185	533

## Red Ash Coal Co.

Red Ash No. 1, .....	Slope,....	Non-gas,	Fan,....	15	5	3.9	80	1.5	Vulcan, ..	Steam,....	56,840	50,850	59,760	84	605
Red Ash No. 2, .....	Slope,....	Non-gas,	Fan,....	15	5	3.9	72	1.5	Vulcan, ..	Steam,....	55,720	21,160	60,100	100	211

## Wilkes-Barre and Scranton Coal and Iron Co.

Hillman, .....	Shaft,....	Gaseous,	Fan,....	30	10	8	30	1.5	Tanaqua, ..	Steam,....	41,180	12,480	40,160	15	832
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## Miners' Mills Coal Mining Co.,

Healey, .....	Slope,....	Non-gas,	Fan,....	16	4.25	4	35	.5	Guibal, ...	Steam,....	23,520	23,520	24,500	31	758
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TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh and Wilkes-Barre Coal Co. Hollenback, ..... South Wilkes-Barre, ..... Stanton, ..... Maxwell, ..... Jersey washery, .....	Luzerne,.....	C. F. Huber, .....	Wilkes-Barre, .....	{ W. H. Herring, (out- side), M. R. Morgans (inside) } Douglas Bunting, Chief Engineer.	Wilkes-Barre, ..	C. R. R. of N. J.
Lehigh Valley Coal Co. Prospect, ..... Dorrance, ..... Franklin, ..... Franklin washery, ..... Henry washery, .....	Luzerne,.....	S. D. Warriner, ..	Wilkes-Barre, .....	F. E. Zerbey, .....	Wilkes-Barre, ..	Lehigh Valley
Delaware and Hudson Co. Baltimore No. 5, ..... Baltimore tunnel, ..... Conyngham, ..... Baltimore No. 5 washery, ..... Baltimore Tunnel washery, ..... Conyngham washery, .....	Luzerne,.....	C. C. Rose, .....	Scranton, .....	E. R. Pettebone, .....	Dorrance, ..	Delaware and Hudson
Red Ash Coal Co. Red Ash No. 1, ..... Red Ash No. 2, .....	Luzerne,.....	S. V. Tench, .....	Wilkes-Barre, .....	S. V. Tench, .....	Wilkes-Barre, ..	C. R. R. of N. J.
Wilkes-Barre and Scranton Coal Hillman, .....	Luzerne,.....	J. D. Caryl, .....	Wilkes-Barre, .....	J. D. Caryl, .....	Wilkes-Barre, ..	Lehigh Valley
Miners' Mills Coal Mining Co. Healey, .....	Luzerne,.....	.....	.....	M. J. Healey, .....	Plains, .....	Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh and Wilkes-Barre Coal Co.	{ Luzerne,..... }	197,906	36,112	31,815	265,833	181	688	2	2	6,768	53,465	94
Hollenback, .....		339,610	30,634	67,414	417,658	206	919	15	15	10,735	92,525	150
South Wilkes-Barre, .....		139,469	36,696	7,792	243,357	140	898	2	8	7,912	13,233	119
Stanton, .....		494,663	38,396	11,098	454,107	210	1,036	6	8	12,241	59,893	124
Maxwell, .....		1,121,648	141,238	118,069	1,380,955	.....	3,541	13	33	37,656	219,116	487
Jersey washery, .....	Luzerne,.....	71,074	3,611	.....	74,685	215	35	1	2	.....	.....	3
Totals, .....		1,192,722	144,849	118,069	1,455,640	.....	3,577	14	35	37,656	219,116	490
Lehigh Valley Coal Co.	{ Luzerne,..... }	658,623	40,500	3,487	703,010	219	1,652	11	37	11,965	115,580	119
Prospect, .....		225,999	35,050	46,375	297,424	203	604	3	3	3,605	40,615	108
Dorrance, .....		188,885	24,272	3,679	216,836	213	508	2	1	8,000	7,685	90
Franklin, .....		1,073,507	90,222	53,541	1,217,270	.....	2,865	17	41	29,570	163,889	317
Washeries:		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin, .....	{ Luzerne,..... }	90,753	.....	.....	90,753	213	40	.....	.....	.....	.....	.....
Henry, .....		94,215	33,390	.....	127,605	213	55	.....	1	.....	.....	3
Totals, .....		184,968	33,390	.....	218,358	.....	95	.....	1	.....	.....	3
Totals, .....		1,258,475	123,612	53,541	1,435,628	.....	2,966	17	42	29,570	163,889	320

TABLE 2.--Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co.	Luzerne.....	203,897	37,492	.....	241,069	169	659	1	13	7,509	2,499	58
Baltimore No. 5, .....		193,654	36,725	4,285	224,044	183	439	4	1	5,891	1,958	51
Baltimore tunnel, .....		64,677	26,502	2,162	93,341	91	342	...	3	2,017	1,946	29
Conyngnam, .....		461,338	100,719	6,427	568,484	.....	1,440	5	16	15,387	5,334	138
Washeries:	Luzerne,.....	7,777	.....	.....	7,777	15	•	.....	.....	.....	.....	.....
Baltimore No. 5, .....		31,197	.....	.....	31,197	89	•	.....	.....	.....	.....	.....
Baltimore tunnel, .....		6,924	.....	.....	6,924	48	.....	.....	.....	.....	.....	.....
Conyngnam, .....		45,898	.....	.....	45,898	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	507,236	100,719	6,427	614,382	.....	1,440	5	16	15,387	5,334	138
Red Ash Coal Co.	Luzerne,.....	157,453	10,340	1,037	168,830	164	212	.....	1	1,396	6,825	22
Red Ash No. 1, .....		.....	.....	.....	.....	164	274	.....	1	1,214	4,575	25
Red Ash No. 2, .....		157,453	10,340	1,037	168,830	.....	488	.....	5	2,610	11,400	47
Totals, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilkes-Barre and Scranton Coal and Iron Co.	Luzerne,.....	18,422	12,730	8,288	39,500	149	140	.....	1	1,950	10,405	9
Hillman, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miners' Mills Coal Mining Co.		6,878	730	857	8,465	165	49	1	1	950	1,000	8
Healey, .....		3,141,186	303,040	188,219	3,722,445	.....	8,662	37	100	88,123	411,135	1,012
Grand totals, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Included with Breaker employees.

†Coal taken to No. 2 breaker.

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lohigh and Wilkes-Barre Coal Co., .....	{ Luzerne..... }	1,192,732	114,849	118,069	1,455,640	.....	3,577	14	35	37,656	219,116	490
Lehigh Valley Coal Co., .....		1,258,475	123,612	53,541	1,435,638	.....	2,960	17	42	29,570	163,880	320
Delaware and Hudson Co., .....		1,507,433	100,719	6,427	614,382	.....	1,440	5	16	15,387	5,334	138
Red Ash Coal Co., .....		17,453	10,340	1,037	168,830	.....	486	.....	5	2,610	11,400	147
Wilkes-Barre and Scranton Coal and Iron Co., .....		18,422	12,780	8,288	29,590	.....	140	.....	1	1,960	10,405	9
Miners' Mills Coal Mining Co., .....		6,878	730	887	8,465	.....	49	1	1	960	1,000	8
Totals, .....		5,141,186	383,040	188,219	3,722,446	.....	8,652	37	100	88,123	411,185	1,012

TABLE 2—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Lehigh and Wilkes-Barre Coal Co., .....	Luzerne,	12	504	45	8,752	2,236	6	1	.....	240	17,420	11	10,022	.....	10
Lehigh Valley Coal Co., .....		.....	.....	34	3,594	7,900	14	1	.....	113	8,480	16	8,645	.....	10
Delaware and Hudson Co., .....		.....	.....	19	3,873	5,133	2	.....	4	128	9,139	7	5,600	.....	2
Red Ash Coal Co., .....		42	1,200	3	3,900	506	3	.....	.....	14	1,117	2	930	.....	.....
Wilkes-Barre and Scranton Coal and Iron Co., .....		.....	.....	7	1,050	1,050	.....	.....	.....	7	558	2	800	.....	1
Miners' Mills Coal Mining Co., .....		1	175	.....	.....	175	.....	.....	.....	2	110	.....	.....	.....	1
Totals, .....		55	1,939	108	22,477	24,416	25	2	6	504	36,444	38	25,907	8	24



TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Col- lieries	County	Inside										Outside										(Grand total inside and outside)
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Enginemen and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh and Wilkes-Barre Coal Co.	{ Luzerne, }	1	2	8	265	169	71	35	3	92	536	....	1	5	20	38	26	4	68	162	688	
Hollenback, .....		1	2	11	272	163	99	62	3	113	726	....	1	7	32	51	12	5	81	193	919	
South Wilkes-Barre, .....		2	1	9	282	112	75	51	3	46	93	674	....	1	7	39	71	17	3	86	224	898
Stanton, .....		1	1	8	236	250	58	57	5	71	50	738	....	1	6	35	56	29	4	116	238	1,136
Maxwell, .....		5	7	36	1,055	634	303	205	11	322	143	2,724	....	4	25	127	219	75	16	351	817	3,511
Jersey washery, .....	Luzerne,	....	....	....	....	....	....	....	....	....	....	....	....	1	1	5	10	....	19	36	36	
Totals, .....		5	7	36	1,055	634	303	205	14	322	143	2,724	....	5	26	132	229	75	16	370	833	3,577
Lehigh Valley Coal Co.	{ Luzerne, }	7	3	18	431	313	191	45	14	....	217	1,269	....	2	42	50	36	16	6	242	354	1,663
Prospect, .....		2	1	8	297	81	73	22	4	....	148	549	....	1	13	22	16	....	4	89	145	694
Dorrance, .....		1	1	4	143	61	53	7	4	....	79	336	....	1	17	29	16	3	8	92	152	598
Franklin, .....		10	5	39	781	461	317	74	22	....	474	2,174	....	4	72	92	68	19	13	423	691	2,865
Washeries:	{ Franklin, Henry, }	....	....	....	....	....	....	....	....	....	....	....	....	1	....	3	3	....	....	33	40	40
Franklin, .....		....	....	....	....	....	....	....	....	....	....	....	....	1	....	6	3	....	1	44	55	55
Henry, .....		....	....	....	....	....	....	....	....	....	....	....	....	2	....	9	6	....	1	77	95	95
Totals, .....		10	5	39	781	461	317	74	22	....	474	2,174	....	6	72	101	74	19	14	500	786	2,960



TABLE 3.—Recapitulation

Names of Operators	County	Inside											Outside											Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Turnpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside			
Lehigh and Wilkes-Barre Coal Co.	Luzerne	5	7	36	1,055	634	303	205	14	322	143	2,724	....	5	26	132	229	75	16	370	853	3,577		
Lehigh Valley Coal Co.		10	5	30	781	461	317	74	22	....	474	2,174	....	6	72	101	74	19	14	500	786	2,960		
Delaware and Hudson Co.		4	2	12	355	279	114	18	13	137	70	1,004	....	3	22	70	104	102	6	123	266	1,440		
Red Ash Coal Co.		1	....	....	64	69	29	3	4	45	....	217	1	1	11	13	18	31	2	189	269	486		
Wilkes-Barre and Scranton Coal and Iron Co.		1	....	2	35	25	10	2	2	10	2	89	1	1	3	9	4	8	1	24	51	140		
Miners' Mills Coal Mining Co.		1	....	....	12	12	3	1	....	2	....	31	1	1	....	3	7	1	1	4	18	49		
Totals		22	16	80	2,362	1,489	776	303	55	516	689	6,239	3	17	137	325	436	236	40	1,216	2,413	8,652		

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh and Wilkes-Barre Coal Co. Hollenback..... South Wilkes-Barre..... Stanton..... Maxwell.....	{ Luzerne..... }	21 22 20 21	18 18 17 17	23 22 19 21	..... ..... ..... .....	..... 12 13 13	12 25 15 24	17 18 ..... 20	19 17 ..... 21	15 16 ..... 16	19 19 18 19	20 20 20 21	18 17 18 17	181 296 140 210
Lehigh Valley Coal Co. Prospect..... Dorrance..... Franklin.....	{ Luzerne..... }	23 21 21	17 18 14	24 24 23	..... ..... .....	10 9 10	22 17 22	20 20 20	22 20 21	21 19 21	23 20 19	17 18 15	21 17 23	219 263 213
Delaware and Hudson Co. Baltimore No. 5..... Baltimore tunnel..... Conyngham.....	{ Luzerne..... }	16 19 12	12 18 13	19 24 16	..... ..... .....	10 10 4	17 19 14	15 17 13	17 17 18	13 12 6	16 11 .....	16 17 .....	14 17 .....	169 183 81
Red Ash Coal Co. Red Ash No. 1..... Red Ash No. 2.....	{ Luzerne..... }	17 17	15 15	18 18	..... .....	10 10	19 19	16 16	16 16	13 13	6 6	19 19	15 15	164 164
Wilkes-Barre and Scranton Coal and Iron Co. Hillman.....	Luzerne.....	13	14	16	.....	8	14	14	9	15	15	16	15	149
Miners' Mills Coal Mining Co. Healey.....	Luzerne.....	14	13	16	.....	5	10	13	14	14	19	20	21	159

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 12	George Walswage,...	Polish,.....	Laborer, ...	58	M.	1	...	Henry shaft, .....	Luzerne,.....	Fatally injured by fall of rider coal. Died on the way home.
29	Nicholas Helfrich, ..	German,.....	Culin man, .....	65	M.	1	...	Franklin shaft, .....	Luzerne,.....	Fatally injured by being run over by rock cars. Outside.
31	Frank Brandon, .....	American,...	Timberman, ...	35	M.	1	5	South Wilkes-Baire, .....	Luzerne,.....	Instantly killed by being caught on a revolving shaft. Outside.
Feb. 14	Samuel Stretckie, ...	Slavonian,...	Laborer, ...	30	M.	1	2	Healey, .....	Luzerne,.....	Killed by fall of top rock.
March 1	Malachi Cavanaugh,...	American,...	Box car loader, .....	27	S.	...	...	Maxwell, .....	Luzerne,.....	Fatally injured. Run over by a gondola car. Outside.
1	John Kosek, .....	Russian,.....	Miner, .....	56	M.	1	2	Prospect shaft, .....	Luzerne,.....	Fatally injured by fall of top rock. Died same day.
3	William Walker, .....	American,...	Miner, .....	32	S.	...	...	Midvale slope, .....	Luzerne,.....	Fatally injured by an explosion of gas. Died March 10.
5	John Remish, .....	Polish,.....	Laborer, ...	37	S.	...	...	Trospect shaft, .....	Luzerne,.....	Slightly injured on hands and face by falling rock. He died from acute mania March 15, 1906.
19	Patrick Hayes, .....	Irish,.....	Miner, .....	57	M.	1	3	Dorrance, .....	Luzerne,.....	Fatally injured. Squeezed between car and prop on slope.
21	Hugh W. Griffiths, ...	Welsh,.....	Laborer, ...	29	S.	...	...	Stanton, .....	Luzerne,.....	Fatally injured by fall of rock. Died same day.
26	Charles Moroski, .....	Polish,.....	Miner, .....	48	M.	1	8	Franklin, .....	Luzerne,.....	Instantly killed by a premature blast.
25	Charles Johnston, ...	American,...	Car loader, ...	28	S.	...	...	Jersey washery, ...	Luzerne,.....	Fatally injured. Run over by a gondola car. Outside.
May 14	Alex Crutcoski, .....	Lithuanian,...	Laborer, ...	26	S.	...	...	Maxwell, .....	Luzerne,.....	Instantly killed by a premature blast.
25	George Burns, .....	American,...	Laborer, ...	29	S.	...	...	Baltimore tunnel, ...	Luzerne,.....	Instantly killed by fall of top coal.
30	Joseph Tarnosky, .....	Polish,.....	Laborer, ...	33	S.	...	...	Henry shaft, .....	Luzerne,.....	Fatally injured by a premature blast. Died same day.
3	Joseph Slaviski, .....	Polish,.....	Door boy, ...	17	S.	...	...	Henry Red Ash shaft	Luzerne,.....	Fatally burned by paint.
5	Joseph Senesky, .....	Polish,.....	Laborer, ...	20	S.	...	...	Henry shaft, .....	Luzerne,.....	Instantly killed by fall of coal.
23	Dominick Begroo, ...	Lithuanian,...	Miner, .....	37	M.	1	2	Hollenback, .....	Luzerne,.....	Instantly killed by fall of slate.
26	John Darako, .....	Lithuanian,...	Miner, .....	27	M.	1	1	Maxwell, .....	Luzerne,.....	Back injured by fall of rock. Died August 18.
27	Stanley Budsin, .....	Polish,.....	Miner, .....	32	M.	1	3	Baltimore No. 5, .....	Luzerne,.....	Instantly killed by runaway cars.
31	David Phillips, .....	American,...	Runner, ...	18	S.	...	...	Baltimore tunnel, ...	Luzerne,.....	Fatally injured by fall of rock. Died August 11.



TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Aug.	1 Joseph Shincott, .....	Lithuanian.	Driver, .....	22	S.	...	...	South Wilkes-Barre,	Luzerne, .....	Instantly killed. Caught under some empty cars that had jumped the track.
13	Frank Karpinsky, ...	Polish, .....	Laborer, ...	21	S.	...	...	Wyoming Five Foot slope,	Luzerne, .....	Fatally burned by an explosion of a keg of powder.
21	Lee Minick, .....	American,...	Timber cut- ter.	56	M.	1	...	Maxwell, .....	Luzerne, .....	Instantly killed by being run over by railroad cars. Outside.
Sept.	15 Peter August, .....	Polish, .....	Laborer, ...	26	S.	...	...	Wyoming Five Foot slope,	Luzerne, .....	Fatally injured by fall of rock.
29	Thomas Carney, .....	American,...	Driver, .....	27	S.	...	...	Maxwell, .....	Luzerne, .....	Instantly killed by an explosion of powder.
29	Perris Thomas, .....	American,...	Laborer, ...	24	S.	...	...	Maxwell, .....	Luzerne, .....	Fatally injured by an explosion of powder.
Oct.	3 John Koneskie, .....	Polish, .....	Laborer, ...	35	M.	...	...	Dorrance, .....	Luzerne, .....	Instantly killed by fall of rock.
5	Thomas Lonshock, ...	Russian,...	Laborer, ...	48	M.	1	W. 3	Baltimore tunnel, ..	Luzerne, .....	Skull fractured by piece of coal falling on him. Died same day.
6	Joseph Mozer, .....	Lithuanian.	Miner, .....	21	S.	...	...	Dorrance, .....	Luzerne, .....	Instantly killed by fall of rock.
19	Stephen Rudakoski, ..	Lithuanian.	Laborer, ...	24	S.	...	...	Prospect shaft, ....	Luzerne, .....	Fatally burned on face, hands and body by an explosion of gas. Died October 22.
22	Patrick Boyle, .....	Irish, .....	Road clean- er.	77	M.	1	...	South Wilkes-Barre,	Luzerne, .....	Instantly killed by being struck by empty cars.
25	Joseph Jalindeck, ....	Polish, .....	Laborer, ...	50	M.	1	2	Dorrance, .....	Luzerne, .....	Hips squeezed by being caught between a small locomotive and the door frame of the engine house. Died November 12. Outside.
Nov.	27 Richard Evans, .....	Welsh, .....	Driver, .....	18	S.	...	...	Stanton, .....	Luzerne, .....	Fatally injured by falling under a loaded trip of cars. Died December 2.
Dec.	3 John Homick, .....	Russian,...	Miner, .....	34	M.	1	...	Hollenback, .....	Luzerne, .....	Fatally injured. Struck by a piece of slate in his chamber.
12	Martin Povolski, ....	Polish, .....	Laborer, ...	28	M.	1	2	Henry Red Ash, ...	Luzerne, .....	Fatally injured by an explosion of dynamite.
22	John Marso, .....	Polish, .....	Laborer, ...	32	M.	1	2	Baltimore tunnel, ..	Luzerne, .....	Fatally injured by fall of coal and rock.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Henry Evans, .....	Welsh,.....	Doorman, .....	67	M.	Stanton, .....	Luzerne,.....	Bruised on hips and cut on head by being caught between door frame and car.
12	Michael Miscanon, ....	Slavonian,...	Miner, .....	33	M.	Red Ash No. 2, ....	Luzerne,.....	Two ribs fractured by falling from a ladder that he was using.
15	Richard Thomas, .....	Welsh,.....	Miner, .....	66	M.	Red Ash No. 1, ....	Luzerne,.....	Crushed head and face by coal flying from blast.
15	Silas Pritchard, .....	American,...	Plane footman, ...	24	S.	Prospect shaft, ....	Luzerne,.....	Leg badly bruised by being caught between a loaded and an empty car.
16	Adam Normant, .....	Polish,.....	Miner, .....	33	M.	Prospect shaft, ....	Luzerne,.....	Hand smashed while blocking a car.
17	Stanley Sumsel, .....	Polish,.....	Miner, .....	30	S.	South Wilkes-Barre, .....	Luzerne,.....	Face and chest cut by a premature blast.
20	Steve Kivalavage, .....	Polish,.....	Slatepicker, .....	14	S.	Stanton, .....	Luzerne,.....	Both arms lacerated and broken by being caught on a revolving shaft. Outside.
22	Joseph Andrawlavage, ..	Polish,.....	Miner, .....	32	S.	Wyoming shaft, ....	Luzerne,.....	Back injured by fall of rock.
23	Griff Evans, .....	Welsh,.....	Driver, .....	27	M.	South Wilkes-Barre, .....	Luzerne,.....	Leg fractured by being thrown off a car against the roof.
24	Thomas Irvin, .....	American,...	Runner, .....	23	M.	Stanton, .....	Luzerne,.....	Hurt on head, neck and back by being thrown against the roof from a car.
24	Anthony Urban, .....	Lithuanian,...	Miner, .....	33	M.	Baltimore No. 5, ..	Luzerne,.....	Leg broken by being struck by a piece of coal from a blast.
24	John Morris, .....	Welsh,.....	Miner, .....	42	W.	Hollenback, .....	Luzerne,.....	Bruised on legs and back by some coal falling on him.
29	John Berwiski, .....	Polish,.....	Laborer, .....	27	S.	Oakwood shaft, ....	Luzerne,.....	Seriously injured by falling off the cage while being hoisted up the shaft.
31	William Connelly, .....	American,...	Driver, .....	28	S.	Maxwell, .....	Luzerne,.....	Leg and three ribs fractured and shoulder dislocated by being caught under a car.
Feb. 3	Jake Stunkis, .....	Polish,.....	Miner, .....	45	S.	Franklin, .....	Luzerne,.....	Leg broken by being struck by a loaded car.
3	Adam Ulwrick, .....	German,.....	Miner, .....	42	M.	South Wilkes-Barre, .....	Luzerne,.....	Severely injured by a premature blast.
5	Joe Garko, .....	Polish,.....	Laborer, .....	23	S.	South Wilkes-Barre, .....	Luzerne,.....	Feet fractured by a fall of top rock.
7	Mike Holka, .....	Slavonian,...	Laborer, .....	23	M.	Baltimore No. 5, ...	Luzerne,.....	Burnt on hands and face by an explosion of gas.
7	Mike Kinsly, .....	Slavonian,...	Laborer, .....	26	M.	Baltimore No. 5, ...	Luzerne,.....	
7	Austin Klitrick, .....	American,...	Driver, .....	19	S.	Stanton, .....	Luzerne,.....	
12	Thomas Lewis, .....	Polish,.....	Miner, .....	40	M.	Stanton, .....	Luzerne,.....	Leg fractured by fall of rock.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 14	Anthony Sheminskis,...	Polish,.....	Miner, .....	30	M.	South Wilkes-Barre,	Luzerne,.....	Severely cut on face, head and body by a premature blast.
14	Joe Dimick, .....	Polish,.....	Miner, .....	30	S.	South Wilkes-Barre,	Luzerne,.....	Severely cut on face, head and body by a premature blast.
20	David I. Davis, .....	Welsh,.....	Driver, .....	19	S.	Stanton, .....	Luzerne,.....	Severely squeezed about the hips by being caught between car and prop.
21	Anthony Wytowski, .....	German,.....	Miner, .....	29	S.	Dorrance, .....	Luzerne,.....	Knee fractured by a premature blast.
23	Sylvester Wassol, .....	Russian,.....	Miner, .....	37	M.	Stanton, .....	Luzerne,.....	Fractured about the hips and ribs by fall of coal.
26	John Golden, .....	Polish,.....	Laborer, .....	36	M.	} Baltimore No. 5, ..	Luzerne,..... {	Burned on face, hands and arms by an explosion of powder.
26	John Grtack, .....	Polish,.....	Laborer, .....	29	M.		Luzerne,..... {	Leg fractured by being caught between two cars.
26	Robert Hughes, .....	Welsh,.....	Driver, .....	18	S.	Stanton, .....	Luzerne,.....	Burned on face, hands and hips by an explosion of powder.
28	Jacob Kleese, .....	Polish,.....	Laborer, .....	25	S.	Midvale slope, .....	Luzerne,.....	Burned about head, neck and arms by an explosion of powder.
March 8	Felix Bonghnoski, ....	Polish,.....	Miner, .....	37	M.	Midvale slope, .....	Luzerne,.....	Shin and back bruised by being struck after an empty car being caught between Leg fractured by being caught between the bumpers of some loaded cars.
8	Paul Raub, .....	American,...	Laborer, .....	22	S.	Eastmore No. 2, ..	Luzerne,.....	Face, hands, limbs and body scalded by steam from hot ashes. Outside.
13	John R. Evans, .....	American,...	Patcher, .....	18	S.	South Wilkes-Barre,	Luzerne,.....	Knee dislocated by being caught in bucket while loading culm. Outside.
28	Lorenzo Miles, .....	American,...	Laborer, .....	28	M.	Red Ash No. 2, ..	Luzerne,.....	Leg and arm bruised by being caught between car and rib.
May 21	Mike Budner, .....	Slavonian,...	Laborer, .....	37	M.	Henry washery, ....	Luzerne,.....	Foot smashed and head cut by being caught between car and locomotive.
23	Thomas A. Lewis, ....	Welsh,.....	Laborer, .....	38	M.	Maxwell, .....	Luzerne,.....	Outside.
June 1	Andrew Yonconyn, ....	Slavonian,...	Locomotive helper, .....	19	S.	Jersey washery, ....	Luzerne,.....	Collar bone fractured by being caught between car and rib.
13	Stanley Schultz, .....	Lithuanian,...	Laborer, .....	26	S.	Prospect shaft, .....	Luzerne,.....	Face and arm injured by a premature blast.
13	Mike Sowchich, .....	Russian,.....	Miner, .....	40	M.	Prospect shaft, .....	Luzerne,.....	Hip severely squeezed by falling under a loaded car.
15	Mike Kosick, .....	Russian,.....	Driver, .....	23	S.	Wyoming shaft, ....	Luzerne,.....	

June	15	John Ferry, .....	Irish, .....	Asst. tracklayer, ..	45	M.	Midvale slope, .....	Luzerne, .....	Side injured and burned on face and hands by an explosion of gas.
	15	John Laird, .....	Slavonian, .....	Laborer, .....	51	M.	Midvale slope, .....	Luzerne, .....	Seriously burned on face and hands by an explosion of gas.
	15	Jacob Monaghan, .....	Irish, .....	Tracklayer, .....	25	M.	Midvale slope, .....	Luzerne, .....	Seriously burned on face and hands by an explosion of gas.
	15	David Price, .....	Welsh, .....	Bratticeman, .....	43	M.	Henry Red Ash, .....	Luzerne, .....	Seriously burned on face and hands by an explosion of gas.
	18	Mike Beyson, .....	Polish, .....	Miner, .....	22	M.	Henry Red Ash, .....	Luzerne, .....	Seriously burned on face and hands by an explosion of gas.
	18	Joseph Sieroski, .....	Slavonian, .....	Driver, .....	20	S.	Midvale slope, .....	Luzerne, .....	Leg fractured and scalp lacerated by being run over by a loaded car.
	19	Tallie Evans, .....	American, .....	Doorboy, .....	17	S.	South Wilkes-Barre, .....	Luzerne, .....	Slightly burned on face, hands and abdomen by an explosion of powder.
	23	Anthony Noruski, .....	Russian, .....	Miner, .....	38	M.	Baltimore tunnel, .....	Luzerne, .....	Face and hands burned by an explosion of powder.
	30	Charles Allen, .....	English, .....	Asst. timberman, ..	27	S.	Baltimore No. 2, ..	Luzerne, .....	Leg crushed so badly that amputation was necessary. Caught between two cars.
July	2	Joseph Minnski, .....	Polish, .....	Miner, .....	36	S.	Prospect shaft, .....	Luzerne, .....	Lurid on face, hands and back by gas.
	3	Geo. R. Roberts, .....	Welsh, .....	Pumpman, .....	32	M.	South Wilkes-Barre, .....	Luzerne, .....	Leg broken by a fall from platform.
	27	Michael Redur, .....	Lithuanian, .....	Miner, .....	25	S.	Baltimore No. 2, ..	Luzerne, .....	Seriously injured by fall of coal.
	27	Samuel Morgan, .....	American, .....	Laborer, .....	24	M.	Maxwell, .....	Luzerne, .....	Back injured by fall of top coal.
	27	Frank McCall, .....	Irish, .....	Laborer, .....	49	S.	South Wilkes-Barre, .....	Luzerne, .....	Leg fractured and back injured by fall of top coal.
	28	Stanley Jack, .....	Polish, .....	Laborer, .....	60	S.	Dorance, .....	Luzerne, .....	Leg broken by fall of rider coal.
	31	Jack Krush, .....	Polish, .....	Company laborer, ..	30	M.	South Wilkes-Barre, .....	Luzerne, .....	Furnia about hands and back by gas.
Aug.	3	George Yenshaw, .....	Slavonian, .....	Miner, .....	30	M.	Baltimore No. 2, ..	Luzerne, .....	Squeezed about ribs and hips by being caught between car and platform.
	10	Owen McCabe, .....	American, .....	Engineer, .....	31	M.	Oakwood shaft, .....	Luzerne, .....	Head cut by being hit with a piece of coal that fell down the shaft.
	13	Frank Ranitski, .....	Russian, .....	Driver, .....	22	S.	Midvale slope, .....	Luzerne, .....	Cut over eye and eye bruised by being struck by an iron bar.
	15	Herbert Lewis, .....	Welsh, .....	Blacksmith, .....	30	M.	Prospect, .....	Luzerne, .....	Cut over eye and shoulder injured by being kicked by a mule. Outside.
	17	John Eano, .....	Slavonian, .....	Runner, .....	21	S.	Midvale slope, .....	Luzerne, .....	Finger cut off while snaggling a car.
	17	Luke Walsh, .....	Irish, .....	Company miner, ..	46	M.	Stanton, .....	Luzerne, .....	Bruised about head and side by rock falling on him.
	20	Michael Copcoran, .....	American, .....	Timberman, .....	35	M.	Hillman, .....	Luzerne, .....	Back and hands burned by an explosion of gas.
	20	Frank Hyduck, .....	Austrian, .....	Laborer, .....	23	S.	Midvale slope, .....	Luzerne, .....	Skull and tibia bones fractured by being struck by flying coal from blast.
	21	John Adams, .....	English, .....	Tracklayer, .....	30	M.	Conyngham, .....	Luzerne, .....	Arm broken by being caught between the bumpers of two loaded cars.
	25	Alex Poplowski, .....	Polish, .....	Miner, .....	24	S.	Hillman slope, .....	Luzerne, .....	Seriously injured on back and hips by fall of rock.
	27	Mike Pusartie, .....	Polish, .....	Breaker oiler, ....	22	S.	Prospect, .....	Luzerne, .....	Two fingers cut off at the first joint by being caught between shaker and shaker arm. Outside.
Sept.	4	Leon Seoble, .....	American, .....	Fireman, .....	32	S.	Conyngham, .....	Luzerne, .....	Straight on both hands and legs by falling into sump of hot water. Outside.
	6	Adam Drost, .....	Polish, .....	Miner, .....	31	S.	Midvale slope, .....	Luzerne, .....	Arm and thumb injured by being struck by a falling rock.
	14	Peter Brennan, .....	American, .....	Patcher, .....	17	S.	Baltimore No. 2, ..	Luzerne, .....	Tight leg fractured above the ankle by fall of top slate.
	15	John Crowpshaw, .....	Slavonian, .....	Driver, .....	16	S.	Maxwell, .....	Luzerne, .....	Skull fractured by mule kicking him.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Sept. 15	John Slocock, .. .. .	Slavonian,...	Dumper, .. .	23	S.	Jersey washery, ...	Luzerne,.....	Eye knocked out by being struck by a piece of casting that he was clipping.
27	George Cival, .. .	American,...	Doorboy, .. .	16	S.	Maxwell, .. .	Luzerne,.....	Compound fracture of the leg by being run over by some empty cars. Outside.
28	Thomas Johnston, .. .	American,...	Shaft footman, ...	28	S.	South Wilkes-Barre, .. .	Luzerne,.....	Arm and finger fractured by being run over by a loaded car.
29	John P. Sock, .. .	Polish, .. .	Miner, .. .	40	M.	South Wilkes-Barre, .. .	Luzerne,.....	Finger fractured and back bruised by fall of bone coal falling on him.
29	James Owens, .. .	Welsh, .. .	Patcher, .. .	17	S.	South Wilkes-Barre, .. .	Luzerne,.....	Ankle fractured by being caught between empty cars that jumped the track.
Oct. 5	Andrew Henscy, .. .	Slavonian,...	Miner, .. .	33	M.	Prospect, .. .	Luzerne,.....	Spine injured by being run over by an empty car.
5	Andrew Wasiko, .. .	Slavonian,...	Company man, ...	29	M.	[ Midvale slope, ....	Luzerne,.....	Seriously burned on face, hands, head and back by an explosion of gas.
5	Jno. Crake, .. .	Polish, .. .	Company man, ...	31	M.			Seriously burned on face, hands and back by an explosion of gas.
5	Barney Boyle, .. .	Irish, .. .	Company man, ...	34	M.			Seriously burned on face and hands by an explosion of gas.
5	George Powell, .. .	American,...	Driver, .. .	19	S.			Seriously burned on face, hands, head and back by an explosion of gas.
5	Patrick Relly, .. .	Irish, .. .	Miner, .. .	50	M.	South Wilkes-Barre, Luzerne,.....	Luzerne,.....	Slightly burned on face, hands, head and back by an explosion of gas.
10	George Pascoe, .. .	American,...	Miner, .. .	30	M.			Ankle bone fractured by a small piece of rock falling on it.
12	Richard Bullock, .. .	English, .. .	Miner, .. .	53	S.	Baltimore No. 5, ...	Luzerne,.....	Collar bone broken and shoulder cut by a piece of rock falling on him.
16	Morgan Bevan, .. .	Welsh, .. .	Mine foreman, ...	49	M.	Henry shaft, .. .	Luzerne,.....	Foot badly bruised by being caught between the crank wheel and bed plate of engine.
19	Frank Davis, .. .	Lithuanian,...	Miner, .. .	22	M.	Prospect shaft, ....	Luzerne,.....	Seriously burned on hands, face and arms by an explosion of gas.
20	Charles Kulakoski, .. .	Lithuanian,...	Laborer, .. .	24	S.			Injured across the back by fall of bone coal.
	Steve Chensky, .. .	Polish, .. .	Miner, .. .	31	S.	Maxwell, .. .	Luzerne,.....	



Oct.	23	Andrew Emrick, .....	Slavonian,...	Laborer, .....	21	S.	Prospect shaft, ....	Luzerne,.....	Leg broken by a piece of coal falling off the rib and striking him.
	24	Joseph Macako, .....	Lithuanian,.	Slatepicker, .....	14	S.	Hollenback, .....	Luzerne,.....	Leg broken and injured about the body by falling down off the steps at the breaker. Outside.
Nov.	2	Harry Mauskay, .....	Slavonian,...	Driver, .....	32	M.	Henry Red Ash, ...	Luzerne,.....	Severely squeezed by being caught between loaded cars.
	15	Frank Kaskie, .....	Lithuanian,.	Footman, .....	20	S.	Dorrance, .....	Luzerne,.....	One hand and index finger of the other hand cut off by being run over by a loaded car.
	17	Martin Voski, .....	Slavonian,...	Slope footman, ..	23	S.	Prospect shaft, ....	Luzerne,.....	Chest bruised and toes crushed by being struck by flying coal from a runaway trip of cars.
	19	Bernard Waliz, .....	American,...	Slatepicker, .....	15	S.	Baltimore No. 5, ...	Luzerne,.....	Right leg from ankle to knee cut; also thighs on both legs cut. Run over by a cuni car. Outside.
	23	John Hoppel, .....	English,.....	Driver, .....	23	M.	Healey, .....	Luzerne,.....	Seriously squeezed about the body by being caught between a car and prop. The car jumped the track.
	28	Frank Consinski, .....	Lithuanian,.	Laborer, .....	40	M.	Maxwell, .....	Luzerne,.....	Head and shoulder lacerated by a piece of coal and right leg fractured by fall of coal and rock.
Dec.	5	Mike Goriaski, .....	Russian,.....	Laborer, .....	35	M.	Prospect shaft, ....	Luzerne,.....	Right ankle broken by a piece of coal rolling against it.
	5	Steve Gary, .....	Slavonian,...	Laborer, .....	33	M.	Red Ash No. 2, ....	Luzerne,.....	Burned on hands, face and back by an explosion of gas.
	5	Beny Romavage, .....	Polish,.....	Miner, .....	28	M.	Maxwell, .....	Luzerne,.....	Right leg cut, necessitating amputation. Caught between car humpers. Outside.
	24	Mike Baranish, .....	Slavonian,...	Laborer, .....	45	M.	Red Ash No. 2, ....	Luzerne,.....	

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

January 12, George Henry Walswavage, Polish, laborer, while loading a car in his chamber, was struck by a piece of rider coal. He died from the injuries received.

February 14, Samuel Stretckie, Slavonian, laborer, was instantly killed at the Miners' Mills Coal Mining Company's Colliery by fall of rock while he was loading a car of coal.

March 1, Prospect, John Kosek, Russian, miner, was fatally injured by fall of top rock. The assistant foreman had been in Kosek's place early in the afternoon and had called his attention to a piece of middle rock that he thought was unsafe. He ordered him to take it down. He did not do so, and while working under the rock, it fell on him. He died in less than two hours after the accident.

March 21, Stanton, Hugh W. Griffiths, Welsh, laborer, while loading a car was struck by a piece of rock. He died two hours later from his injuries.

June 26, Baltimore Tunnel, George Burns, American, laborer, was instantly killed by fall of top coal. While the miner was drilling a hole in a piece of top coal to blow it down, the coal fell on Burns who was loading a car.

July 5, Henry, Joseph Senesky, Polish, laborer, was instantly killed by a fall of coal. While he was loading a car, a piece of rider coal about 24 feet long, 18 feet wide, and 6 inches thick, fell and struck him on the head. The fire-boss did not notice anything wrong in this chamber when making his morning examination, and the miner claimed that he had examined the roof and found it in good condition, but there was a slip in the rider which caused the accident.

July 23, Hollenback, Dominick Begroo, Lithuanian, miner, was instantly killed by fall of slate. While he was helping his laborer load a car of coal, a piece of top slate fell on him. The piece was 1 foot thick, 18 feet wide, and 15 feet long, running thin towards the face of the breast.

July 26, Maxwell, John Darako, Lithuanian, miner, had his back injured by fall of rock while he was at work in his chamber. He was taken to the City Hospital where he died on August 18.

July 31, Baltimore Tunnel, David Phillips, American, runner, was fatally injured by fall of rock. While he was standing on the side of the road, waiting for the miner to load his car, a piece of rock fell on him. He died August 11.

September 15, Wyoming Five Foot Slope, Peter August, Polish, laborer, was fatally injured by fall of rock. The miner had been advised by the mine foreman, shortly before the accident happened, to take down this bad roof, but he neglected to do so.

October 3, Dorrance, John Koneskie, Polish, laborer, was loading coal in the face of the breast alongside of the car, when a piece of rock fell on him. He died half an hour after the accident.

October 5, Baltimore Tunnel, Thomas Lonschock, Russian, laborer, was loading a car when a piece of coal fell on him. He died same day at the City Hospital at 9 P. M.

October 6, Dorrance, Joseph Mozer, Lithuanian, miner, was instantly crushed to death by fall of middle rock.

December 3, Hollenback, John Homick, Russian, miner, was drilling a hole in the face of his chamber when a piece of slate fell on his head. He died from his injuries on the way to the hospital.

December 22, Baltimore Tunnel, John Marso, Polish, laborer, was waiting in his chamber for a car to be brought in by the driver so that he could block it. About the time the driver arrived with the car, a piece of coal and rock fell on him inflicting injuries from which he died at the City Hospital the same day.

### Cars

March 19, Dorrance, Patrick Hayes, Irish, miner, was walking up the slant slope on his way home from work. When he was about 300 feet from the head of the slope, the empty trip came down, and at the point where he turned to the side, the first car jumped the track and turned into the rib, catching him between the car and the prop. He died at the hospital on March 21.

July 27, Baltimore No. 5, Stanley Budsins, Polish, miner, was instantly killed by runaway cars. The accident occurred in No. 1 Slope at fourth west lift Red Ash vein. The slope runner was collecting his trip and was bumping against a car on the slope, when the head block broke, allowing two cars to run away that caught Budsins on the slope.

August 1, South Wilkes-Barre, Joseph Shincott, Lithuanian, driver, was riding down No. 3 Slope in the first empty car of a trip when the second car jumped the track. The engineer stopped the trip and the first two cars uncoupled. Shincott jumped out of the car and started to run down the slope, but he was overtaken by the cars and run over at the latches of the branch at the foot of the slope.

October 22, South Wilkes-Barre, Patrick Boyle, Irish, road cleaner, was sent to the second west No. 2 Slope, Baltimore vein, to clean the road. When the footman ran a trip of empty cars to the branch, two of them jumped the track. He then signaled the engineer to hoist, which he did for a short distance up the slope in order to get the cars on the road. The footman then ran some loaded cars from the track end of the passing branch to the dish where he found Boyle lying alongside of the loaded cars, dead. He had evidently been struck by the empty trip and instantly killed.

November 27, Stanton, Richard Evans, Welsh, driver, was riding on the bumper of the first car with one foot on the spreader and the other sliding on the rail, when in some manner he slipped and fell under the trip, which ran over him. He died December 2.

### Explosions of Gas

March 3, Midvale Slope, William Walker, American, miner, was fatally injured by an explosion of gas. On the morning of the accident he was told by the fire-boss to stay out of his chamber until the bratticeman put up a brattice for him, as there was gas in the place. He disobeyed the orders, walked up to the face of his chamber and ignited the gas. He died March 10.

March 5, Prospect Shaft, John Remish, Polish, laborer, was fatally burned by an explosion of gas. After firing a blast Remish and his miner walked up to the face of their chamber with naked lights, and ignited a quantity of gas that had accumulated after they left the chamber. Remish received fatal burns and died March 15.

October 19, Prospect Shaft, Stephen Rudakoski, Lithuanian, laborer, was fatally burned by an explosion of gas, in the face of the gangway in the Red Ash Vein, on Road No. 746, Red Ash Plane. He died October 22. The accident was caused by a driver leaving a door open, which caused the ventilating current to be cut off from the face of the chamber thus allowing the gas to accumulate unknown to the workman.

### Powder and Dynamite

August 13, Wyoming Five Foot Slope, Frank Karpinsky, Polish, laborer, was fatally burned by an explosion of powder. He went back to his miner's box to sit down and while he was sitting there, in some manner a keg of powder, which was standing on top of the box, exploded, burning Karpinsky so badly that he died two days later.

September 29, Maxwell, Thomas Carney, American, driver, and Perris Thomas, American, laborer, were instantly killed by an explosion of powder. Carney worked in No. 10 Tunnel west and No. 4 Plane, Baltimore Vein. About 9 A. M. Earnest Dunlap, the runner, told Carney to go up the plane and run down an empty car, so that extra cars could be hoisted to the top of the plane. He went up to the engine and a few minutes later an explosion of powder occurred. His body was found lying between the plane track and the double branch track at the head. Perris Thomas, worked in No. 10 Tunnel, East Baltimore Vein, chamber No. 4. About 9 A. M. when he was going out of the gangway at chamber No. 3, he was struck on the head by flying debris from the explosion of powder which Carney set off at the head of No. 4 Plane.

December 12, Henry Red Ash, Martin Povolski, Polish, laborer, in some way, set off a dynamite cap which exploded some dynamite. He was fatally injured and died shortly after the accident.

### Blasts

March 26, Franklin, Charles Moroski, Polish, miner, prepared a blast, inserted the squib and lit it. He had gone not more than 10 feet away when the blast exploded, killing him instantly.

June 14, Maxwell, Alex Crutcoski, Lithuanian, laborer, was instantly killed by a premature blast. The miner had prepared three shots to be fired in the face by an electric battery, and while Crutcoski was in the face connecting the wires, the other laborer went back to the battery, in the heading behind the brattice, and connected it. Through some misunderstanding of signals, he fired the blast before Crutcoski had gone away from the face.

June 30, Henry Shaft, Joseph Tarnosky, Polish, laborer, was fatally injured by a premature blast. While he was eating his lunch a laborer fired a blast in the chamber close by. He neglected to warn Tarnosky who was struck by the flying coal. He died the same day from his injuries.



## Miscellaneous

July 3, Henry Red Ash, Joseph Slaviski, Polish, door-boy, was fatally burned. Some men who were covering the steam pipes had been painting the canvass on the fourth line running to No. 21 Slope engine. After completing their day's work, they placed their paint in the empty car plane, away from any transportation or travel. Slaviski left his door and wandered down to where the paint had been placed. A spark from his naked light fell into the paint, causing it to blaze up and set his clothes on fire. Before the flames could be extinguished he had received fatal burns. He died at the City Hospital July 5.

## Cars, Outside

January 29, Franklin, Nicholas Helfrich, German, employed on the culm dump, for some reason left the dump and went down on the rock-road dump. While he was there a small locomotive, pushing a loaded trip of rock cars, came along and in some manner he was struck by them. He died soon afterward.

March 1, Maxwell, Malachi Cavanaugh, American, box car loader, was fatally injured. While he was pushing a car down a light grade, another car started down and ran into him.

May 25, Jersey Washery, Charles Johnston, American, car loader, was fatally injured. There were two empty cars standing outside the breaker. Johnston took one car and ran it under the chutes to load it. Another loader went up the track to bring down two more cars. When these cars approached the breaker they bumped the second car, it ran against the one Johnston was on and knocked him off between the cars. When he fell the second car ran over him.

August 21, Maxwell, Lee Minick, American, timber cutter, employed in the prop yard, in some unknown manner was run over by a large railroad car and instantly killed.

## Machinery, Outside

January 31, South Wilkes-Barre, Frank Brandon, American, timberman, went down under the floor of the engine house while the machinery was running. It is supposed that his coat caught on a screw on the small shaft, and he was whirled around under the shaft. He was instantly killed, every bone in his body apparently having been broken.

## Miscellaneous, Outside

October 25, Dorrance, Joseph Jalindeck, Polish, laborer, worked on the refuse dump. Intending to go out on the locomotive, he stepped inside the engine house to put his dinner pail in the engine cab. This he tried to do while the engine was coming out of the engine house. He reached into the cab window to put his pail in, and was caught between the window frame of the cab and the frame of the door of the engine house. He was squeezed very badly and died November 12.



## IMPROVEMENTS

## LEHIGH AND WILKES-BARRE COAL COMPANY

Hollenback No. 2.—Outside: Brick locomotive house, new engines, Hillman slope.

Inside: Number 20 Tunnel Hillman to Stanton, No. 21 Tunnel Hillman to Stanton, No. 22 Tunnel Kidney to Stanton, No. 23 Tunnel Hillman to Stanton. Compressed air haulage plant.

South Wilkes-Barre No. 5.—Inside: No. 16 Tunnel Hillman to Kidney, No. 17 Tunnel Kidney to Hillman. Compressed air haulage plant.

Stanton No. 7.—Outside: 488 H. P. water tube boilers, steel head frame Empire No. 4 shaft, extension railroad to Empire shaft, brick engine house Empire shaft, brick locomotive house, brick oil house.

Inside: Compressed air locomotive. No. 11 Tunnel Red Ash to Ross.

Maxwell No. 20.—Outside: Supply house.

Inside: No. 7 Rock slope. Compressed air haulage plant.

No. 21 Tunnel Red Ash to Red Ash. Tunnel Hillman to Hillman.

## LEHIGH VALLEY COAL COMPANY

Henry Colliery.—A series of safe cover test holes was drilled to determine the working limits in the 5 foot Hillman and Bowkley Veins.

A permanent concrete steel overcast was completed in Red Ash Vein.

New empty car plane and turnout were completed in Red Ash Shaft.

Numbers 21, 23, 27 and 28 sub-slopes have been started in Red Ash Shaft and are being extended.

A new 28x10x36 inch Goyne pump with 12 inch column and 8 inch exhaust pipe from the foot of shaft to the surface has been installed in the Red Ash Vein.

Numbers 51, 53, 54 and 56 tunnels have been finished through the Red Ash anticlinal.

A new permanent concrete steel overcast was completed in Wyoming Marcy Vein.

Preparations have been made and plans outlined and work commenced unwatering the Enterprise workings lying to the east of Henry.

Additional pumps have been placed in the 5 foot vein at the counter level of the Henry Shaft and a series of Diamond drill holes put through the pillar. These holes are being reamed out, so that it is expected by the close of the coming year the Enterprise workings will be unwatered and the coal in that property reclaimed.

Additional steam lines and column pipe lines and emergency pumps incidental to this work have been set in place. The new permanent plant to follow.

The Henry Washery has reclaimed all of the old Wyoming banks on the north side of the L. V. R. R. and the shovel and locomotive outfit has been transferred to the Enterprise banks to reclaim the coal through the Henry Washery.

A new bridge was constructed across the C. R. R. of N. J. and public road for the culm dump.

**Prospect Colliery.**—The electric transportation roads have been extended in the Red Ash Vein, and preparations are under way for the installation of further electrical equipment in haulage hoist and dumping in this colliery.

**Dorrance Colliery.**—Tunnels were started from the foot of the Baltimore shaft to tap the Red Ash Vein, also a tunnel at that point for the empty car and foot turnouts.

Tunnels Numbers 11 and 12 were completed from Hillman to the Bowkley.

Tunnels Numbers 15 and 17 completed from 5 foot vein to the Hillman Vein.

Tunnel Number 16 completed from Hillman to Abbott.

Tunnels Numbers 18 and 19 completed from Cooper to the Bennett through the Mill Creek anticlinal.

The tunnel from the foot of No. 6 Rock slope was finished to the Bennett Vein, and a second outlet tunnel through the Mill Creek anticlinal is being driven.

A new stable is being constructed in the Hillman Vein.

Silting has been extensively carried on at this colliery in the Hillman, Abbott and Bowkley Veins.

A new No. 20 sub-slope in the Baltimore has been started.

Numbers 14 and 16 sub-slopes have been continued in the Cooper Vein.

Number 15 sub-slope in the Bennett and No. 13 in the Red Ash have been continued.

Number 2 slope in the Baltimore Vein has been reopened and is being extended.

Number 12 slope in the Hillman River Warrant has been extended.

A new electrical hoist and transportation outfit is being installed.

A new brick concrete mine locomotive house built.

Dust house torn down and replaced with stack devices for killing dust.

A new frame carpenter and blacksmith shop completed.

New standard warehouse built.

**Franklin Colliery.**—Number 10 Rock slope surface to rope vein completed, giving an additional outlet for the Rock slope Red Ash-Ross district.

Number 21 Tunnel finished from sump vein to 5 foot vein.

Number 22 Tunnel finished from sump vein to Baltimore vein.

A new central pumping plant is under construction in the Red Ash vein, equipped with 28x12x36 compound duplex pump, with 14 inch column pipe bore hole, 12 inch steam hole and exhaust hole from the Red Ash to the surface.

A 14 inch drainage bore hole from the surface to the Ross vein has been made through which all the water from the upper lifts of the long slope district will be drained to the central pump plant in the Red Ash.

New steam lines are under construction for the above plant.

The following slopes were extended during the year:

Number 9 Slope Top Split of Red Ash.

Number 4 Bottom Split of Red Ash.

Number 11 Slope Sump Vein.

Number 7 Slope Sump Vein.

Number 8 Top Split of Red Ash.

## DELAWARE AND HUDSON COMPANY

Baltimore Slope.—A washery is being erected to clean the old Baltimore slope bank.

Baltimore No. 2.—Number 7 Slope extended 475 feet and completed in Red Ash vein.

Number 9 Slope extended 1,500 feet in Red Ash vein.

Baltimore Tunnel.—Number 6 Slope in Red Ash vein extended 200 feet.

Baltimore No. 5.—Number 1 Slope Red Ash vein extended 900 feet and finished.

Conyngham.—Number 7 Tunnel from Hillman vein to Main shaft was finished 496 feet long. This is a new landing in shaft. All coal from upper veins will be handled here and the Hillman shaft abandoned.

Number 9 Plane Baltimore vein extended 350 feet.

Number 10 Plane Kidney vein extended 275 feet.

Number 11 Plane Abbott vein extended 250 feet.

Number 12 Plane Abbott vein extended 375 feet and 6 inches.

Rope hole put down a depth of 92 feet for operation of these veins.

New head frame over Main shaft and pair of 26x48 inch first motion engines installed in new brick engine house.

Old frame fan house partially rebuilt of brick.

A rock tunnel has been finished from the foot of shaft to Stanton vein 475 feet total distance, and 423 feet of this was driven in 1906. Size 7x16 inch.

Slope was driven down on Stanton Vein a distance of 600 feet in 1906, 7x12 inch.

## Mine Foremen's Examinations

The examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held June 19 and 20.

The board was composed of James Martin, Mine Inspector, Francis H. Kohlbraker, Superintendent, and Thomas Finn and Felix Wisniewski, Miners.

The following applicants were granted certificates:

## Mine Foremen

Peter J. McDavitt, Howard F. Reilly, Bernard F. McGrane, Peter McGovern, Thomas R. Gambold, Osborne Morgan, Thomas Holton, Anthony Jones, John J. McAndrew, John B. Corgan, David M. Stanton, George Hopper, Elmer E. McQuown, Jenkin Thomas, Evan W. Bryant, John D. Davis and Jenkin Evans.

## Assistant Mine Foremen

Jesse Henson, John J. Cassidy, William Connell, Joseph Dzialowski, Mortimer H. Watson, Henry Smith, Patrick H. Duffy, James Lindsay, Walter A. McGuire, John Donnelly, Lewis Morgan, John H. Williams, Edward Sterling, William H. Evans, John F. McTague, Daniel Howells, Edward Tredinnick, Richard Richards, Stephen Zapka, Caspar Urbanak, William V. Roberts, Harry Adams, William Llwellyn, Thomas George, John F. George, Charles Balcock, William H. Evans and Ambros Griffiths.

## Eighth District

LUZERNE COUNTY

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Kingston, Pa., February 23, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Eighth Anthracite District for the year ending December 31, 1906.

The report contains the usual tables and statistics, with a brief description of the most important improvements made at the collieries, and also a brief description of the fatal accidents.

Respectfully submitted,  
P. M. BOYLE,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	15
Number of mines, .....	26
Number of mines in operation, .....	26
Number of tons of coal shipped to market, .....	3,015,177
Number of tons used at mines for steam and heat, .....	353,988
Number of tons sold to local trade and used by employes, .....	98,348
Number of tons produced, .....	3,467,513
Number of persons employed inside of mines, .....	6,564
Number of persons employed outside, .....	2,367
Number of fatal accidents inside of mines, .....	25
Number of fatal accidents outside, .....	7
Number of non-fatal accidents inside of mines, .....	77
Number of non-fatal accidents outside, .....	13
Number of tons of coal produced per fatal accident inside, .....	138,700
Number of persons employed per fatal accident inside, ..	263
Number of persons employed per fatal accident outside, ..	338
Number of persons employed per non-fatal accident inside, ..	85
Number of persons employed per non-fatal accident outside, .....	182
Number of wives made widows, .....	21
Number of children orphaned, .....	51
Number of steam locomotives used inside of mines, ....	2
Number of steam locomotives used outside, .....	11
Number of compressed air locomotives used inside, .....	3
Number of electric motors used inside, .....	14
Number of fans in use, .....	29
Number of gaseous mines in operation, .....	18
Number of non-gaseous mines in operation, .....	8

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TABLE A  
PRODUCTION OF COAL

Names of Operators	Tons
Kingston Coal Company, .....	1,095,519
Temple Iron Company, .....	734,431
Lehigh Valley Coal Company, .....	696,506
Clear Spring Coal Company, .....	234,044
Stevens Coal Company, .....	153,673
Delaware, Lackawanna and Western Railroad Company,	153,321
Raub Coal Company, .....	136,928
Peoples Bank of Wilkes-Barre, Receiver, .....	131,321
East Boston Coal Company, .....	98,430
Troy Coal Company, .....	33,340
Total, .....	<u>3,467,513</u>

Production by Counties

Luzerne, .....	<u>3,467,513</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Kingston Coal Co., .....	8	2	10	13	4	17	136,940	84,271	1,626	636	2,262	203	318	125	159
Temple Iron Co., .....	5	.....	5	21	2	23	146,886	34,973	1,919	453	2,372	384	.....	91	227
Lehigh Valley Coal Co., .....	6	4	10	21	4	25	116,064	33,167	1,160	463	1,623	133	116	55	116
Clear Spring Coal Co., .....	1	.....	1	3	1	4	234,044	78,015	1,519	171	1,690	519	.....	173	171
Stevens Coal Co., .....	1	.....	1	5	1	6	153,674	30,735	228	110	338	228	.....	46	110
D. L. and W. R. Co., .....	1	.....	1	3	.....	3	153,321	51,107	235	107	343	235	.....	79	.....
Raub Coal Co., .....	1	.....	1	5	.....	5	136,928	27,385	310	152	462	310	.....	62	.....
Peoples Bank of Wilkes-Barre, Receiver, .....	1	.....	1	2	.....	2	131,321	65,660	232	110	342	232	.....	116	.....
East Boston Coal Co., .....	1	1	2	4	.....	4	98,430	24,607	261	122	383	261	122	65	.....
Troy Coal Co., .....	.....	.....	.....	.....	1	1	.....	.....	73	43	116	.....	.....	.....	43
Totals and averages for district, .....	25	7	32	77	13	90	138,700	45,033	6,564	2,367	8,931	263	338	85	132

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, .....	1					1			2				4	16.00
Falls of slate, .....								1					1	4.00
Falls of roof, .....			1		1				1		3		8	32.00
Mine cars, .....			1		1			1	1		1		5	20.00
Explosions of gas and dust, .....										1			1	4.00
Explosions of powder and dynamite, .....											1		1	4.00
Premature blasts, .....		1					1	1				1	4	16.00
Machinery, .....											1		1	4.00
Totals, .....	1	1	2		2	1	1	5	4	1	6	1	25	100
Causes of Accidents Outside														
Cars, .....	1								1			1	3	42.86
Machinery, .....											1		1	14.28
Miscellaneous, .....							1			1	1		3	42.86
Totals, .....	1						1		1	1	2	1	7	100
Grand totals inside and outside, .....	2	1	2		2	1	2	5	5	2	8	2	32	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, .....		1				2		1	2				6	7.79
Falls of slate, .....						1		1					2	2.60
Falls of roof, .....	1		2		2			1	1	2			9	11.69
Mine cars, .....		4	1			1	3	1	3	3	2	1	21	27.27
Explosions of gas and dust, .....	4					1		1			1	1	16	20.77
Explosions of powder and dynamite, .....	13		1				2			1	3		11	14.29
Premature blasts, .....	1	1	1						2				6	7.79
By mules, .....	1		1								1		3	3.90
Machinery, .....			1										1	1.30
Miscellaneous, .....									1	1			2	2.60
Totals, .....	11	6	7		2	5	5	5	14	12	8	2	77	100
Causes of Accidents Outside														
Cars, .....						1			1	1			3	23.07
Machinery, .....				1					1	1		1	4	30.77
Miscellaneous, .....	3								1	1		1	6	46.16
Totals, .....	3			1		1			3	3		2	13	100
Grand totals inside and outside, .....	14	6	7	1	2	6	5	5	17	15	8	4	90	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Mine foremen, .....								1					1
Fire bosses and assistants, .....								1			1		2
Miners, .....		1			1	1	1	1	4		3	1	14
Miners' laborers, .....	1		1							1	1		5
Drivers and runners, .....			1					1					1
Doorboys and helpers, .....					1								1
All other employes, .....											1		1
Totals, .....	1	1	2	...	2	1	1	5	4	1	6	1	25
Outside													
Slatepickers (boys), .....											1		1
All other employes, .....	1						1		1	1	1	1	6
Totals, .....	1						1		1	1	2	1	7
Grand totals inside and outside, ....	2	1	2	....	2	1	2	5	5	2	8	2	32

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	6	2	2	...	1	4	2	4	10	5	1	1	39
Miners' laborers, .....	2	1	2	...	1	...	1	2	2	2	...	...	13
Drivers and runners, .....	...	1	2	...	...	1	2	1	2	2	4	...	17
Doorboys and helpers, .....	...	1	...	...	...	...	...	...	...	1	1	1	4
All other employes, .....	1	2	...	...	...	...	...	...	...	1	...	...	4
Totals, .....	11	6	7	...	2	5	5	5	14	12	8	2	77
Outside													
Slatepickers (boys), .....	1	...	...	1	...	1	...	...	...	2	...	...	3
All other employes, .....	2	...	...	1	...	1	...	...	3	1	...	2	10
Totals, .....	3	...	...	1	...	1	...	...	3	3	...	2	13
Grand totals inside and outside, ...	14	6	7	1	2	6	5	5	17	15	8	4	90

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....									1	1	2		4
English, .....								1	1		1		3
Welsh, .....							1						3
Polish, .....	1	1			1	1		2	1		2	2	11
Italian, .....			1										1
Slavonian, .....					1		1		2				4
Lithuanian, .....	1								1		2		4
Russian, .....			1							1			2
Totals, .....	2	1	2		2	1	2	3	5	2	3	2	32

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	2	1	1		2		2	3	3	1	1	13
Welsh, .....			2			1							3
Irish, .....	1	1					1					1	3
German, .....							1						3
Polish, .....	2	2	2			2	2	2	5	2	2	1	24
Hungarian, .....							1						2
Italian, .....									1	2			7
Slavonian, .....	2	1			2				3	1	1		10
Lithuanian, .....	2								2	1			4
Austrian, .....	1								2	2			3
Russian, .....	3		1					1	2	4		1	12
Bohemian, .....			1										1
Totals, .....	14	6	7	1	2	6	5	5	17	15	8	4	90



TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Kingston Coal Co.																
Kingston Colliery No. 4:																
Number 1, .....	Shaft, ....	Gaseous, .....	2 Fans, {	12.4	3.7	3.7	140	1.3	Guibal, ...	Steam, .....	7	141,200	126,150	155,980	304	415
Number 2, .....	Shaft, ....	Gaseous, .....	2 Fans, {	25	5	5	86	2.1								
				25	8	8	80	2.3	Guibal, ...		6	91,765	75,553	107,836	274	276
Kingston Colliery No. 2:																
Number 3, .....	Shaft, ....	Gaseous, .....	Fan, .....	21	6	6.9	60	1.3	Guibal, ...	Steam, .....	5	90,850	87,100	95,050	223	391
Number 4, .....	Slope and shaft, .....	Gaseous, .....	Fan, .....	23	8	7.8	60	1.3	Guibal, ...	Steam, .....	5	101,316	78,476	108,833	177	443
Temple Iron Co.																
Mt. Lookout, .....	Shaft, ....	Gaseous, .....	2 Fans, {	20	6.5	5	86	2.5	Guibal, ...	Steam, .....	6	127,598	121,866	135,848	283	430
Forty Fort, .....	Shaft, ....	Gaseous, .....	Fan, .....	20	6.5	5	85	1.8								
				17	4.5	3	90	.....	Guibal, ...		7	93,800	58,700	97,900	329	178
Harry E., .....	Shaft, ....	Gaseous, .....	2 Fans, {	20	6.5	5	90	2	Guibal, ...		7	161,200	146,600	162,600	378	387
Lehigh Valley Coal Co.																
Exeter Colliery:																
Red Ash, .....	Shaft, ....	Gaseous, .....	2 Fans, ...	20	6.8	5.10	76	1.2	Guibal, ...	Steam, .....	8	208,450	142,585	220,820	376	379
Pittston and Marcy, .....	Shaft, ....	Gaseous, .....	Fan, .....	20	5.11	5.11	60	1.3								
Knight and Checker, .....	Shaft, ....	Gaseous, .....	Fan, .....	20	6.11	6.7	60	.9	Guibal, ...		3	95,600	75,800	109,700	122	621



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Kingston Coal Co. Kingston No. 4, .....	Luzerne,.....	R. S. Mercur, .....	Kingston, .....	Gwilym Edwards, .....	Edwardsdale, ....	D. L. and W.
Kingston No. 2, .....	Luzerne,.....	F. H. Hemelright, ..	Scranton, .....	George Steele, ....	Wyoming, .....	{ D. L. and W. and L. V. Lehigh Valley Lehigh Valley
Mt. Lookout, Forty Feet, .....	Luzerne,.....	S. D. Warriner, .....	Wilkes-Barre, ...	F. E. Zerby, .....	Wilkes-Barre, ...	Lehigh Valley
Harry E., .....	Luzerne,.....	J. L. Cake, .....	Pittston, .....	J. Paul Cake, ....	Pittston, .....	D., L. and W.
Lehigh Valley Coal Co. Exeter, .....	Luzerne,.....	H. W. Kingsbury,...	Scranton, .....	D. W. Evans, ....	Pittston, .....	Lehigh Valley
Maitly, Westmoreland, .....	Luzerne,.....	R. F. Phillips, .....	Scranton, .....	H. G. Davis, .....	Kingston, .....	D. L. and W.
Clear Spring Coal Co. Clear Spring, .....	Luzerne,.....	S. J. Tonkine, .....	Luzerne, .....	S. J. Tonkine, ....	Wilkes-Barre, ...	Lehigh Valley
Clear Spring Washery, .....	Luzerne,.....	James B. Davis, ....	Luzerne, .....	James B. Davis, ..	Plymouth, .....	L. V. and D. L. and W.
Stevens, .....	Luzerne,.....	W. T. Payne, .....	Kingston, .....	.....	.....	D. L. and W.
D., L. and W. R. Co. Pettebone, .....	Luzerne,.....	Edwin Davis, .....	Wyoming, .....	Edwin Davis, ....	Wyoming, .....	Lehigh Valley
Pettebone Washery, .....	Luzerne,.....	.....	.....	.....	.....	.....
Louise, .....	Luzerne,.....	.....	.....	.....	.....	.....
Raub Coal Co. Peoples Bank of Wilkes-Barre, Receiver .....	Luzerne,.....	.....	.....	.....	.....	.....
Black Diamond, .....	Luzerne,.....	.....	.....	.....	.....	.....
East Boston Coal Co. East Boston, .....	Luzerne,.....	.....	.....	.....	.....	.....
Troy Coal Co. Troy, .....	Luzerne,.....	.....	.....	.....	.....	.....

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries		County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Kingston Coal Co.													
Kingston No. 4, .....		Luzerne, .....	546,751	35,000	513	582,264	247	1,190	4	12	20,934	11,346	130
Kingston No. 2, .....		Luzerne, .....	476,681	10,378	28,190	513,255	249	1,072	6	5	21,423	2,335	133
Totals, .....			1,023,438	45,378	28,703	1,095,519	.....	2,262	10	17	42,357	13,671	263
Temple Iron Co.													
Mt. Lookout, .....		Luzerne, .....	213,107	36,500	5,716	255,323	195	826	4	11	11,349	122,850	58
Forty Fort, .....			219,930	33,763	1,467	255,120	196	684	1	8	7,969	44,730	75
Harry E., .....			180,390	40,321	3,237	223,948	158	762	.....	4	7,496	23,533	89
Totals, .....			613,427	110,584	10,420	734,431	.....	2,372	5	23	26,814	193,093	222
Lehigh Valley Coal Co.													
Exeter, .....		Luzerne, .....	338,019	24,819	5,212	368,050	184	794	2	19	6,731	154,900	122
Maltby, .....			237,973	27,700	3,682	269,355	224	630	6	3	9,411	87,716	10
Westmoreland, .....			46,821	10,660	1,620	59,101	196	209	2	3	860	72,800	33
Totals, .....			622,813	63,179	10,514	696,506	.....	1,623	10	25	17,003	315,406	255
Clear Spring Coal Co.													
Clear Spring, .....		Luzerne, .....	125,826	10,000	13,484	149,310	197	652	1	4	7,606	27,850	79
Clear Spring Washery, .....		Luzerne, .....	75,690	.....	9,074	84,734	112	38	.....	.....	.....	.....	.....
Totals, .....			201,486	10,000	22,558	234,044	.....	690	1	4	7,616	27,850	79
Stevens Coal Co.													
Stevens, .....		Luzerne, .....	126,281	24,196	3,136	153,673	203	338	1	6	4,627	55,000	51

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
D. L. and W. R. R. Co.												
Pettebone, .....	Luzerne, .....	84,423	20,440	6,720	111,583	98	325	1	3	3,125	23,603	49
Pettebone Washery, .....	Luzerne, .....	40,082	1,656	.....	41,738	153	18	.....	.....	.....	.....	.....
Totals, .....		124,505	22,096	6,720	153,321	.....	343	1	3	3,125	23,603	49
Louise, .....	Raub Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Peoples Bank of Wilkes-Barre, Receiver	Luzerne, .....	110,592	17,180	9,156	136,928	185	462	1	5	5,357	16,700	47
Black Diamond, .....	Luzerne, .....	96,274	8,300	4,147	108,721	178	342	1	2	1,562	9,800	43
Black Diamond Washery, .....	Luzerne, .....	.....	22,600	.....	22,600	176	.....	.....	.....	.....	.....	.....
Totals, .....	Luzerne, .....	96,274	30,900	4,147	131,321	.....	342	1	2	1,562	9,800	43
East Boston Coal Co.	Luzerne, .....	69,203	25,000	4,127	98,430	179	383	2	4	2,178	11,900	42
Troy, .....	Troy Coal Co.	27,058	5,475	807	33,340	129	116	.....	1	431	14,925	12
Grand totals, .....		3,015,177	\$53,988	98,348	2,467,513	.....	8,931	32	90	111,092	\$62,038	1,063



TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Kingston Coal Co., .....	Luzerne.....	1,022,428	45,378	98,763	1,005,519	.....	2,962	10	17	42,357	13,671	263
Temple Iron Co., .....		613,127	110,584	10,420	734,131	.....	2,472	5	23	25,844	193,093	222
Lehigh Valley Coal Co., .....		622,812	133,179	10,314	636,506	.....	1,623	10	25	17,003	315,496	255
Clear Spring Coal Co., .....		201,481	10,000	22,558	234,044	.....	1,690	4	4	7,608	97,850	79
Stevens Coal Co., .....		126,481	24,196	3,196	153,673	.....	338	1	6	4,827	55,049	51
Delaware, L., .....		124,505	23,096	6,720	153,321	.....	343	1	3	3,125	23,693	49
Paub Coal Co., .....		110,502	17,189	9,156	136,828	.....	462	1	5	5,357	16,700	47
Peop Bank of Wilkes-Barre, Receiver, .....		96,274	30,900	4,147	131,321	.....	342	1	2	1,562	9,800	43
East Butte Coal Co., .....		69,393	23,000	4,127	98,330	.....	353	2	4	2,178	11,900	42
Troy Coal Co., .....		27,468	5,475	807	33,340	.....	116	.....	1	2,431	14,925	12
Totals, .....		3,015,177	353,988	98,348	3,467,513	.....	8,931	32	90	111,092	682,038	1,063

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Kingston Coal Co., .....	Luzerne,.....	8	75	17	4,350	4,425	4	.....	6	29	6	6,440	3,160	2	2
Temple Iron Co., .....		9	450	20	5,330	5,780	3	.....	6	66	10	12,900	5,500	3	6
Lehigh Valley Coal Co., .....		.....	.....	18	4,000	4,000	2	3	1	67	8	8,200	7,000	1	1
Clear Spring Coal Co., .....		3	125	10	1,500	1,625	.....	.....	.....	10	3	4,000	3,000	1	.....
Stevens Coal Co., .....		9	300	9	1,400	1,700	1	.....	1	14	5	4,300	2,750	1	1
Delaware, Lackawanna and Western R. Co., .....		3	180	10	1,350	1,530	.....	.....	.....	28	2	180	160	.....	.....
Raub Coal Co., .....		13	405	5	630	1,035	2	.....	.....	17	1	500	300	.....	.....
Peoples Bank of Wilkes-Barre Receiver, .....		.....	.....	18	2,518	2,518	1	.....	.....	28	2	3,800	2,800	.....	1
East Boston Coal Co., .....		.....	.....	7	1,262	1,262	.....	.....	.....	27	2	4,000	2,500	.....	2
Troy Coal Co., .....		.....	.....	3	475	475	.....	.....	.....	5	2	210	120	.....	.....
Totals, .....		40	1,535	117	22,815	24,350	13	3	14	291	41	44,510	27,270	10	12

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Wagmen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employees	Total outside	
Kingston Coal Co.																						
Kingston No. 4, .....	Luzerne, ....	2	1	5	376	485	89	22	9	30	145	858	....	1	25	29	84	14	2	177	332	1,190
Kingston No. 2, .....	Luzerne, ....	3	2	1	329	195	117	23	....	38	69	768	....	1	29	19	36	47	2	170	304	1,072
Totals, .....		5	3	6	705	680	206	45	9	68	214	1,626	....	2	54	48	120	61	4	347	636	2,262
Temple Iron Co.																						
Mt. Lookout, .....	Luzerne, ..	2	....	3	417	179	52	19	13	89	10	784	....	1	12	22	31	6	3	67	142	926
Forty Foot, .....		1	2	2	280	99	50	21	8	70	12	536	....	1	11	10	51	13	2	60	148	684
Harry E., .....		1	1	4	218	175	77	42	7	53	21	599	....	1	13	17	49	15	2	66	163	762
Totals, .....		4	3	9	915	444	179	82	28	212	43	1,919	....	3	36	49	131	34	7	193	453	2,372
Lehigh Valley Coal Co.																						
Exeter, .....	Luzerne, ..	2	....	5	262	147	74	3	7	....	94	594	1	1	17	19	29	8	4	121	200	794
Maithy, .....		1	2	5	260	88	55	1	6	....	63	432	....	1	16	15	31	7	3	115	188	620
Westmoreland, .....		1	1	1	48	28	22	4	4	....	....	25	134	....	1	6	6	15	6	2	39	75
Totals, .....		4	3	11	519	243	151	8	17	....	184	1,160	1	3	39	40	75	21	9	275	463	1,623
Clear Spring Coal Co.																						
Clear Spring, .....	Luzerne, ....	1	3	3	229	125	73	16	6	69	3	519	2	1	5	13	59	3	5	45	133	652
Clear Spring Washery, .....		....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	4	....	....	31	38	38
Totals, .....		1	3	3	229	125	73	16	6	69	3	519	2	2	5	15	63	3	5	76	171	690

TABLE 3.—Continued

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Stevens Coal Co.	Luzerne, ....	1	1	2	100	61	36	3	4	7	13	228	1	1	8	14	22	4	3	57	110	338
D. L. and W. R. R. Co.	Luzerne, ....	1	3	56	60	35	35	9	1	11	60	236	...	1	5	18	20	3	2	40	89	325
Pettebone Washery, .....	Luzerne, ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	3	2	11	.....	.....	18	18
Totals, .....	.....	1	3	56	60	60	35	9	1	11	60	236	.....	2	6	21	22	14	2	40	107	343
Raub Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Louise, .....	Luzerne, ....	1	3	1	153	45	38	4	5	37	23	310	1	1	8	22	49	3	4	64	152	462
Peoples Bank of Wilkes-Barre, Receiver	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Black Diamond, .....	Luzerne, ....	1	1	4	48	65	27	7	3	61	15	232	1	1	6	18	22	12	2	48	110	342
East Boston Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Boston, .....	Luzerne, ....	1	2	3	70	50	40	8	6	75	6	261	1	1	4	16	50	16	4	30	122	353
Troy Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Troy, .....	Luzerne, ....	1	.....	.....	31	20	8	.....	1	12	.....	73	1	1	3	4	14	8	2	10	43	116
Grand totals, .....	.....	20	19	42	2,802	1,513	793	182	80	552	561	6,564	8	17	169	247	568	176	42	1,140	2,367	8,981

TABLE 3.—Recapitulation

Names of Operators	County	Inside										Outside								Grand total inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks		All other employees	Total outside
Kingston Coal Co., .....	Luzerne, ..	5	3	6	690	380	206	45	9	68	214	1,626	2	54	48	120	61	4	347	636	2,262	
Temple Iron Co., .....		4	3	9	915	444	179	82	28	212	43	1,919	1	36	49	131	34	7	193	453	2,372	
Lehigh Valley Coal Co., .....		4	3	11	519	263	151	8	17	.....	184	1,160	2	39	40	75	21	9	275	463	1,623	
Clear Spring Coal Co., .....		1	3	3	220	125	73	16	6	69	3	519	2	5	15	63	3	5	76	171	690	
Stevens Coal Co., .....		1	1	2	100	61	36	3	4	7	13	228	1	1	8	22	4	3	57	110	338	
Delaware, Lackawanna and West- ern Railroad Co., .....		1	3	3	56	60	35	9	1	11	60	236	.....	2	6	21	22	14	2	40	107	343
Raub Coal Co., .....		1	3	3	153	45	38	4	5	37	23	310	1	1	8	22	49	3	4	64	152	462
Peoples Bank of Wilkes-Barre, Re- ceiver, .....		1	1	4	48	65	27	7	8	61	15	232	1	1	6	18	22	12	2	48	110	342
East Boston Coal Co., .....		1	2	3	70	50	40	8	1	75	6	261	1	1	4	16	50	16	4	30	122	383
Troy Coal Co., .....		1	.....	.....	31	20	8	.....	1	12	.....	73	1	1	3	4	14	8	2	10	43	116
Totals, .....			20	19	42	2,802	1,513	793	182	80	552	561	6,564	8	17	169	247	568	176	42	1,140	2,367



TABLE 3.—PART 2

Number of Days Worked in Breaker

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Kingston Coal Co.	Luzerne.....	24	21	26	.....	12	26	23	26	23	20	23	23	247
Kingston No. 4 .....	Luzerne, ....	25	21	24	.....	13	25	22	25	24	23	23	22	249
Kingston No. 2, .....														
Temple Iron Co.														
Mt. Lookout, .....	{	18	15	21	.....	10	19	18	21	16	19	20	18	195
Forty Fort, .....	{	18	14	19	.....	12	19	20	21	19	19	16	18	195
Harry B., .....	{	20	16	20	.....	.....	.....	6	23	20	18	17	18	158
Lehigh Valley Coal Co.														
Exeter, .....	{	21	19	23	.....	9	23	22	24	22	21	.....	.....	184
Matlby, .....	{	21	18	23	.....	11	23	23	24	22	18	19	.....	221
Westmoreland, .....	{	15	15	16	.....	8	19	19	23	20	17	22	22	216
Clear Spring Coal Co.														
Clear Spring, .....	Luzerne, ....	20	20	21	.....	8	16	17	21	17	19	19	19	197
Clear Spring Washery, .....	Luzerne, ....	17	7	4	25	5	.....	.....	.....	5	16	11	23	112
Stevens Coal Co.														
Stevens, .....	Luzerne, ....	22	18	22	.....	10	18	17	18	19	21	18	20	203
D. L. and W. R. R. Co.														
Pettebone, .....	Luzerne, ....	12	12	14	.....	8	10	8	8	8	7	5	6	98
Pettebone Washery, .....	Luzerne, ....	17	14	10	21	23	9	11	.....	.....	21	19	8	153
Raub Coal Co.														
Louise, .....	Luzerne, ....	18	15	21	.....	9	16	18	21	17	20	16	14	185
Peoples Bank of Wilkes-Barre, Receiver														
Black Diamond, .....	Luzerne, ....	17	17	19	.....	11	16	13	17	16	16	16	18	176
East Boston Coal Co.														
East Boston, .....	Luzerne, ....	17	8	20	.....	11	19	21	17	17	14	18	17	179
Troy Coal Co.														
Troy, .....	Luzerne, ....	13	13	12	.....	4	12	11	12	11	14	13	14	129

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	Martin Bartori, .....	Polish, .....	Laborer, .....	44 M. ....	1	1	1	Kingston No. 3, ..	Luzerne,	Fatally injured by being squeezed between cars. Outside.
17	Barney Latosky, .....	Lithuanian, ..	Laborer, .....	31 S. ....	.....	.....	.....	Maltby, .....	Luzerne,	Killed by fall of top coal in Eleven Foot vein.
Feb. 3	Adam Savekies, .....	Polish, .....	Miner, .....	28 M. ....	1	1	1	Mt. Lookout, .....	Luzerne,	Instantly killed by premature blast in Marcy vein.
March 1	Frank Semenitis, .....	Italian, .....	Laborer, .....	39 M. ....	1	1	3	Black Diamond, ..	Luzerne,	Instantly killed by fall of top rock in Red Ash vein.
23	William Salamonica, ..	Russian, ....	Driver, .....	19 S. ....	.....	.....	.....	Kingston No. 1, ..	Luzerne,	Fatally injured by being squeezed between cars and door frame.
May 25	Peter Poch, .....	Slavonian, ..	Miner, .....	30 M. ....	1	1	5	Maltby, .....	Luzerne,	Instantly killed by fall of rock in Six Foot vein.
25	Michael Ritz, .....	Polish, .....	Sand boy, .....	17 S. ....	.....	.....	.....	Stevens, .....	Luzerne,	Fatally injured by being squeezed between cars.
June 22	Charles Shapolskey, ..	Polish, .....	Miner, .....	28 M. ....	1	1	1	Kingston No. 2, ..	Luzerne,	Fatally injured by fall of top coal.
July 6	John Onderko, .....	Slavonian, ..	Laborer, .....	49 M. ....	1	1	1	Maltby, .....	Luzerne,	Instantly killed by falling off trestling, distance of eight feet. Outside.
23	Richard E. Jones, .....	Welsh .....	Miner, .....	42 M. ....	1	4	1	Kingston No. 1, ..	Luzerne,	Fatally injured by premature blast. Died at hospital July 29.
Aug. 1	Thomas Minnis, .....	English, .....	Mine foreman,...	38 M. ....	1	3	.....	Forty Fort, .....	Luzerne,	Fatally injured by runaway trip on slope.
8	Mike Goposher, .....	Polish, .....	Laborer, .....	47 S. ....	.....	.....	.....	Kingston No. 4, ..	Luzerne,	Fatally injured by fall of slate.
13	Joseph Yotka, .....	Polish, .....	Miner, .....	38 S. ....	.....	.....	.....	Maltby, .....	Luzerne,	Fatally injured by premature blast.
27	Henry Anos, .....	Welsh, .....	Pine boss, .....	33 M. ....	1	4	.....	Pettebone, .....	Luzerne,	Fatally injured by fall of top rock.
30	John Shortz, .....	English, .....	Miner, .....	41 M. ....	1	5	.....	Louise, .....	Luzerne,	Instantly killed by fall of top rock.
10	Andrew Komar, .....	Slavonian, ..	Miner, .....	49 M. ....	1	1	.....	Kingston No. 3, ..	Luzerne,	Fatally injured by fall of top coal.
15	Joseph Tansa, .....	Polish, .....	Miner, .....	43 M. ....	1	5	.....	Kingston No. 3, ..	Luzerne,	Fatally injured by fall of top coal.
24	Thomas Keegan, .....	American, ..	Brakeman, .....	24 S. ....	.....	.....	.....	Kingston No. 2, ..	Luzerne,	Fatally injured by falling off trestling cars that jumped the track. Outside.
24	Charles Shincones, ....	Lithuanian, ..	Miner, .....	43 M. ....	1	4	.....	Kingston No. 2, ..	Luzerne,	Fatally injured by fall of top rock in main haulage.
29	Michael Leges, .....	Slavonian, ..	Miner, .....	32 M. ....	1	2	.....	Maltby, .....	Luzerne,	Instantly killed by being caught between conveyer wheel and cars on slope.
Oct. 12	William Gibinsky, ....	Russian, ....	Laborer, .....	22 S. ....	.....	.....	.....	Exeter, .....	Luzerne,	Fatally injured by an explosion of gas. Died October 25 at hospital.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 27	Joseph Mackin, ..	American, ..	Oiler, ..	21	S.	....	....	Exeter, .....	Luzerne,	Fatally injured by falling timbers in breaker caused by cyclone. Outside.
Nov. 7	Joseph Viscavage, ....	Lithuanian, ..	Miner, .....	36	S.	....	....	East Boston, .....	Luzerne,	Fatally injured by being burned by powder.
11	Joseph Bessermý, .....	Slavonian, ..	Plateman, ..	45	M.	1	2	Maltby, .....	Luzerne,	Fatally injured by falling through opening in breaker. Outside.
13	John Linshinski, .....	American, ..	Statepicker, ....	16	S.	....	....	Westmoreland, ....	Luzerne,	Instantly killed by falling through rolls in breaker. Outside.
16	Anthony Uncoski, .....	Polish, .....	Miner, .....	34	M.	1	4	Kingston No. 4, ..	Luzerne,	Instantly killed by fall of top rock in chamber.
22	Charles Williams, .....	Welsh, .....	Fire boss, .....	43	M.	1	2	Clear Spring, ....	Luzerne,	Fatally injured by being struck by prop knocked by car.
24	Joseph Kosloski, .....	Lithuanian, ..	Laborer, .....	40	M.	1	2	Mt. Lookout, .....	Luzerne,	Killed by fall of rock in Marcy vein.
26	Stanley Lipski, .....	Polish, .....	Miner, .....	42	M.	1	2	Mt. Lookout, .....	Luzerne,	Killed by fall of rock in Marcy vein.
28	Burt Crulckshank, ....	American, ..	Employe, .....	18	S.	....	....	Mt. Lookout, .....	Luzerne,	Fatally injured by falling under electric motor.
Dec. 10	Anthony Kodiski, .....	Polish, .....	Laborer, .....	45	M.	1	....	East Boston, .....	Luzerne,	Fatally injured by being struck by railroad car at breaker.
21	Martin Brisk, .....	Polish, .....	Miner, .....	50	M.	1	....	Westmoreland, ....	Luzerne,	Instantly killed by premature blast.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	3 Andrew Wasboazle, ...	Russian, ...	Miner, ...	30	M.	Exeter, ...	Luzerne, ...	Burned seriously by explosion of keg of powder, and finger blown off by a discharge of dynamite cap.
4	John Zaramba, ...	Polish, ...	Miner, ...	34	M.	Mt. Lookout, ...	Luzerne, ...	Left arm broken by falling in breaker, a distance of 4 feet. Outside.
5	Michael Minorick, ...	Slavonian, ...	Slatepicker, ...	17	S.	Exeter, ...	Luzerne, ...	Leg broken and back injured by fall of rock.
10	Edward Matscavch, ...	Lithuanian, ...	Laborer, ...	20	S.	Exeter, ...	Luzerne, ...	Foot badly crushed by being squeezed between cars.
11	Bryan Monaghan, ...	American, ...	Runner, ...	26	S.	Harry E., ...	Luzerne, ...	Arm broken by falling on rails. Outside.
13	John O'Nderko, ...	Slavonian, ...	Laborer, ...	49	M.	Malby, ...	Luzerne, ...	Burned about face and hands by explosion of gas.
18	Frank Kichish, ...	Austrian, ...	Laborer, ...	30	S.	Forty Fort, ...	Luzerne, ...	Burned about face and hands by explosion of gas.
19	Michael Yarasavage, ..	Russian, ...	Miner, ...	23	S.	Forty Fort, ...	Luzerne, ...	Jaw broken by being kicked by a mule.
19	Michael Coyle, ...	Irish, ...	Driver, ...	25	M.	Pettephone, ...	Luzerne, ...	Leg broken and cuts on body by flying pieces from a blast.
20	John Capucavage, ...	Polish, ...	Miner, ...	33	M.	Clear Spring, ...	Luzerne, ...	Cut on head by piece of coal falling from breaker. Outside.
23	Joseph Saboskey, ...	Russian, ...	Laborer, ...	23	M.	Kingston No. 4, ...	Luzerne, ...	Burned about face and hands by explosion of gas.
23	Frank Vorosko, ...	Lithuanian, ..	Miner, ...	35	M.	Kingston No. 4, ...	Luzerne, ...	Finger taken off by being squeezed by cars.
24	David Pugh, ...	American, ...	Footman, ...	24	S.	Exeter, ...	Luzerne, ...	Burned about face and hands by explosion of gas.
29	Joseph Yonsitus, ...	Polish, ...	Miner, ...	33	....	Kingston No. 1, ...	Luzerne, ...	Arm broken and bruised by premature blast.
Feb.	7 Joseph Tebis, ...	Slavonian, ..	Miner, ...	23	M.	Forty Fort, ...	Luzerne, ...	Foot smashed and two toes taken off by cars.
7	Anthony Mescavage, ...	Polish, ...	Foot-tender, ...	25	S.	Mt. Lookout, ...	Luzerne, ...	Fractured two ribs and serious scalp wounds by cars.
13	George Kolar, ...	German, ...	Miner, ...	52	S.	Louise, ...	Luzerne, ...	Leg broken by being squeezed between cars.
14	Paul Dombaskie, ...	Polish, ...	Door tender, ...	16	S.	Mt. Lookout, ...	Luzerne, ...	

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 17	John Gilroy, .....	American, ..	Bratticeman, ...	27	M.	Exeter, .....	Luzerne, ....	Leg injured above ankle by fall of coal and rock.
24	Frank Lawley, .....	American, ..	Runner, .....	18	S.	Harry E., .....	Luzerne, ....	Bruised about body by being bumped by cars.
March 1	William Osburn, .....	American, ..	Driver, .....	17	S.	Stevens, .....	Luzerne, ....	Jaw fractured by being squeezed between cars.
6	Belle Zarsco, .....	Polish, .....	Miner, .....	30	M.	Forty Fort, .....	Luzerne, ....	Hip broken, face and hands cut by explosion of powder.
10	Stanley Yawolowsky, ..	Russian, .....	Laborer, .....	22	S.	Exeter, .....	Luzerne, ....	Leg injured and face cut by fall of rock.
16	David Evans, .....	Welsh, .....	Miner, .....	55	S.	Kingston No. 1, .....	Luzerne, ....	Cut about head by fall of top rock.
16	William Thomas, .....	Welsh, .....	Laborer, .....	34	M.	Kingston No. 1, .....	Luzerne, ....	Leg broken by rope striking him.
17	George Klepal, .....	Czech, .....	Miner, .....	50	M.	Mulby, .....	Luzerne, ....	Injured about abdomen by flying pieces of coal from blast.
20	Peter Biza, .....	Polish, .....	Driver, .....	17	S.	Pettebone, .....	Luzerne, ....	Leg broken above ankle by mule falling.
April 23	George Andres, .....	American, ..	Jig runner, ..	19	S.	Mt. Lookout, .....	Luzerne, ....	Leg broken by being caught between locomotive and guard rail. Outside.
May 15	George Zippy, .....	Slavonian, ..	Comp'y laborer, ..	42	M.	Kingston No. 3, .....	Luzerne, ....	Two toes bruised by fall of rock.
18	Stephen Kibough, .....	Welsh, .....	Miner, .....	24	S.	Kingston No. 2, .....	Luzerne, ....	Ankle broken by fall of rock.
June 1	James Williams, .....	Polish, .....	Driver, .....	18	S.	Stevens, .....	Luzerne, ....	Thigh fractured by fall of bony coal.
2	Enoch Rogers, .....	Polish, .....	Miner, .....	38	M.	Kingston No. 1, .....	Luzerne, ....	Bruised about back by fall of slate.
7	John Lopa, .....	Polish, .....	Miner, .....	26	S.	Mt. Lookout, .....	Luzerne, ....	Bruised about shoulders and hip by falling under car.
11	Joseph Dougherty, .....	American, ..	Laborer, .....	19	S.	Kingston No. 2, .....	Luzerne, ....	Left leg fractured above the knee being caught between cars. Outside.
21	Joseph Bugnitus, .....	Polish, .....	Miner, .....	30	M.	Louise, .....	Luzerne, ....	Two ribs fractured by fall of top coal in Ross vein.
27	Thomas Jennings, .....	American, ..	Miner, .....	45	M.	Forty-Fort, .....	Luzerne, ....	Cut about head and shoulders from force of explosion.
July 19	John Oudish, .....	Hungarian, ..	Miner, .....	40	M.	Black Diamond, .....	Luzerne, ....	Hips injured, squeezed between car and prop.
23	George Ganges, .....	Polish, .....	Miner, .....	34	M.	Mt. Lookout, .....	Luzerne, ....	Burned about hands, arms and breast by explosion of powder.
23	Frank Dannels, .....	Polish, .....	Laborer, .....	26	S.	Mt. Lookout, .....	Luzerne, ....	Burned about hands, arms and breast by explosion of powder.



July	24	Edward Bettenbender,...	German,.....	Driver,.....	.....	22	S. Westmoreland,.....	Luzerne,....	Foot crushed by being run over by mine cars.
	28	Philip Devers,.....	Irish,.....	Runner,.....	.....	24	S. Kingston No. 1,.....	Luzerne,....	Bruised about head by being squeezed by cars.
Aug.	4	Michael Pedro,.....	Polish,.....	Miner,.....	.....	35	Mt. Lookout,.....	Luzerne,....	Burned about face and hands by an explosion of gas.
	18	George Beldin,.....	Russian,.....	Miner,.....	.....	35	M. Kingston No. 1,.....	Luzerne,....	Bruised about head and back by fall of slate.
	18	John Hankey,.....	American,.....	Miner,.....	.....	40	M. Black Diamond,.....	Luzerne,....	Cut on leg by fall of top rock.
	27	William Saluski,.....	Polish,.....	Miner,.....	.....	24	S. East Boston,.....	Luzerne,....	Toe broken by a piece of coal falling on him.
	28	John Caturie,.....	American,.....	Driver,.....	.....	18	S. East Boston,.....	Luzerne,....	Ankle broken by being thrown from a car.
Sept.	5	John Cholemskey,.....	Polish,.....	Miner,.....	.....	47	M. Kingston No. 1,.....	Luzerne,....	Squeezed about back and shoulders by cars.
	7	Deibert Pollamut,.....	American,.....	Runner,.....	.....	17	S. Stevens,.....	Luzerne,....	Struck by slope rope fracturing his leg.
	10	Peter Legging,.....	Slavonian,.....	Miner,.....	.....	27	M. Louise,.....	Luzerne,....	Laceration of back, caused by premature blast.
	10	August Dauguzis,.....	Polish,.....	Miner,.....	.....	40	M. Harry E.,.....	Luzerne,....	Head and hip injured by flying pieces from a blast.
	11	John Laukosky,.....	Polish,.....	Driver,.....	.....	20	S. Kingston No. 1,.....	Luzerne,....	Squeezed about hips by runaway car.
	12	Samuel Singer,.....	American,.....	Miner,.....	.....	41	M. Clear Spring,.....	Luzerne,....	Lacerated hands and face by explosion of powder.
	12	Michael Peters,.....	Polish,.....	Laborer,.....	.....	23	M. Clear Spring,.....	Luzerne,....	Lacerated hands and face by explosion of powder.
	13	Henry Dougherty,.....	American,.....	Driver,.....	.....	18	S. Exeter,.....	Luzerne,....	Injured hands and one leg by being run over by cars.
	19	Paul Barbarish,.....	Slavonian,.....	Miner,.....	.....	40	M. Kingston No. 3,.....	Luzerne,....	Laceration of the head by fall of top rock.
	19	Charles Washefskey,.....	Russian,.....	Miner,.....	.....	38	M. Exeter,.....	Luzerne,....	Burned about face, hands, and neck by a explosion of gas.
	19	Frank Sellus,.....	Austrian,.....	Laborer,.....	.....	24	S. Exeter,.....	Luzerne,....	Burned about face, hands, and neck by a explosion of gas.
	22	Michael Poster,.....	Austrian,.....	Miner,.....	.....	42	M. Exeter,.....	Luzerne,....	Burned about face, hands, and neck by a explosion of gas.
	24	Joseph Dreisback,.....	Polish,.....	Miner,.....	.....	47	M. Maltby,.....	Luzerne,....	Bruised about body by fall of top rock.
	28	Michael Senko,.....	Slavonian,.....	Laborer,.....	.....	38	S. Exeter,.....	Luzerne,....	Lacerated wound on knee by car. Out-side.
	28	George Witulius,.....	Russian,.....	Miner,.....	.....	31	S. Exeter,.....	Luzerne,....	Skull fractured by piece of coal falling down shaft.
	29	Michael Ross,.....	Italian,.....	Laborer,.....	.....	32	S. Kingston No. 4,.....	Luzerne,....	Arm and wrist broken by falling from a lumber car. Outside.
	29	Simon Vunepski,.....	Lithuanian,.....	Miner,.....	.....	21	M. Louise,.....	Luzerne,....	Leg fractured and collar bone broken by fall of top coal.
Oct.	1	Arkangley Berando,....	Italian,.....	Laborer,.....	.....	23	S. Exeter,.....	Luzerne,....	Cut on eye and nose broken by fall of rock.
	4	William Ravinsky,.....	Lithuanian,.....	Driver,.....	.....	18	S. Exeter,.....	Luzerne,....	Arm broken by being caught by car and door.
	5	Elmer Hauke,.....	German,.....	Nipper,.....	.....	17	S. Forty Fort,.....	Luzerne,....	Hand injured by cap exploding.
	9	John R. Williams,.....	American,.....	Driver boss,.....	.....	24	S. Mt. Lookout,.....	Luzerne,....	Leg broken below knee by cars.
	11	John Vilnag,.....	Italian,.....	Laborer,.....	.....	38	S. Exeter,.....	Luzerne,....	Hips squeezed between cars.
	12	Paul Tomulovich,.....	Russian,.....	Miner,.....	.....	31	M. Exeter,.....	Luzerne,....	Burned about hands and face by explosion of gas.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 12	Michael Selles, .....	Polish, .....	Driver, .....	20	S.	Mt. Lookout, .....	Luzerne, ....	Burned about face by explosion of gas.
15	Anthony Zeaprup, .....	Russian, ....	Miner, .....	27	S.	Exeter, .....	Luzerne, ....	Foot injured by piece of timber falling on him.
16	Frank Waska, .....	Russian, ....	Miner, .....	24	S.	Exeter, .....	Luzerne, ....	Burned about face and arms by explosion of gas.
18	Samuel Pasqualle, .....	Italian, .....	Loader, .....	22	S.	Clear Spring, .....	Luzerne, ..	Face bruised by being run over by gondola. Outside.
19	Julius Sarenskn, .....	Russian, ....	Laborer, .....	27	M.	Exeter, .....	Luzerne, ....	Burned about face and hands by explosion of gas.
20	Felix Bereskie, .....	Polish, .....	Miner, .....	26	S.	Mt. Lookout, .....	Luzerne, ....	Burned about face and hands by explosion of gas.
25	Thomas Shupanes, .....	Slavonian, ..	Slate picker, ....	16	S.	Forty Fort, .....	Luzerne, ....	Head badly bruised by falling down breaker steps. Outside.
25	Frank Lutz, .....	American, ..	Slate picker, ....	14	S.	Troy, .....	Luzerne, ....	Leg broken by being caught in elevator bucket. Outside.
26	John Gibbons, .....	American, ..	Miner, .....	47	M.	East Boston, .....	Luzerne, ....	Leg broken, scalp wounded and shoulder lacerated by fall of rock.
Nov. 9	Frank Hussie, .....	American, ..	Driver, .....	17	S.	Louise, .....	Luzerne, ....	Jaw bone broken, struck by piece of flying coal from blast.
10	Paul Masura, .....	Hungarian, ..	Driver, .....	20	S.	East Boston, .....	Luzerne, ....	Collar bone broken, squeezed between mule and car.
13	Joseph Pizinskie, .....	Italian, .....	Miner, .....	30	M.	Stevens, .....	Luzerne, ....	Burned about face and hands by powder igniting.
13	Severino Mimekna, .....	Italian, .....	Laborer, .....	18	S.	Stevens, .....	Luzerne, ....	Burned about face and hands by powder igniting.
13	Paul Premo, .....	Italian, .....	Laborer, .....	21	S.	Stevens, .....	Luzerne, ....	Burned about face and hands by powder igniting.
13	John Lukish, .....	Polish, .....	Doortender, .....	17	S.	Forty Fort, .....	Luzerne, ....	Leg broken, run over by cars.
21	Peter Joseph, .....	Polish, .....	Driver, .....	17	S.	Harry E., .....	Luzerne, ....	Face lacerated by mule kicking him.
30	Nicholas Frutprush, ....	Slavonian, ..	Driver, .....	17	S.	Kingston No. 4, .....	Luzerne, ....	Burned about hands and back by explosion of gas.
Dec. 10	Matt Banks, .....	Polish, .....	Doortender, ....	17	S.	Westmoreland, .....	Luzerne, ....	Leg broken and body bruised by falling under cars.

Dec.	11	Joseph Citsnarskey, .....	Russian, ....	Ash wheeler, ..	36	M.	Kingston No. 4, .....	Luzerne, ....	Burned about face and hands by hot ashes. Outside.
	17	Patrick Kane, .....	Irish, .....	Miner, .....	52	M.	Pettebone, .....	Luzerne, ....	Burned about face, hands and back by explosion of gas.
	20	Lewis Space, .....	American, ..	Laborer, .....	43	S.	Westmoreland, .....	Luzerne, ....	Leg broken, and had to be amputated, caught in sheave wheel.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

January 17, Barney Latosky, Lithuanian, laborer, was killed at Maltby Colliery, Lehigh Valley Coal Company, in the eleven foot vein, four foot slope. He was loading a car when a piece of coal fell from the rib on him.

March 1, Frank Semenitis, Italian, laborer, was killed at the Black Diamond Colliery, Peoples Bank, Receiver, in the Red Ash vein No. 2 gangway. The miner was in the act of climbing up on the gob to examine the roof, and told Semenitis to get back. Before he could do so a piece of rock dropped from the roof without warning, killing him.

May 25, Peter Poch, Slavonian, miner, was killed instantly at Maltby Colliery, Lehigh Valley Coal Company, in the 6 foot vein. Having fired a blast in the coal, he went through a cross cut for safety. After the blast had gone off he returned, and was near the edge of the cross cut when a piece of rock fell on him.

June 22, Charles Shapoloskey, Polish, miner, was killed at No. 2 Shaft of the Kingston Coal Company, in the Lance Vein. He was tamping a hole in the lower bench when a piece of the top bench fell on him.

August 8, Mike Gorosher, Polish, laborer, was killed at No. 4 Shaft of the Kingston Coal Company, Red Ash vein, No. 2 Red Ash Slope. He went up to the face of the chamber before the miner had time to prevent him, and a piece of slate fell on him.

August 27, Henry Amos, Welsh, fire-boss, was instantly killed at the Pettebone Colliery, Delaware. Lackawanna and Western Railroad Company, on the Cooper Plane, No. 1 Shaft. He was helping the company men clear up a fall of rock on the plane. They all thought the place was safe, but a piece of rock fell on him without warning.

August 30, John Shortz, English, miner, was instantly killed at Louise Colliery, Raub Coal Company, in the Red Ash vein, Klondike Tunnel. He was shovelling coal back, preparing to load a car, when a piece of rock fell on him.

September 10, Andrew Komar, Slavonian, miner, was fatally injured at No. 3 Shaft of the Kingston Coal Company, in the Ross vein. He was barring out a piece of loose coal, after having fired a shot, when a large piece of top bench fell on him.

September 15, Joseph Tansa, Polish, miner, was killed at No. 3 Shaft of the Kingston Coal Company, in the Ross vein. He was barring out some loose coal, after a blast, when a piece of the top bench fell on him.

September 24, Charles Shincones, Lithuanian, miner, was instantly killed at Shaft No. 2 of the Kingston Coal Company, in the Orchard vein. He was barring out some loose coal when a piece of the roof rock fell on him.

November 16, Anthony Uncoski, Polish, miner, was killed at Shaft No. 4 of the Kingston Coal Company in No. 3 lift Red Ash vein. He got into an empty car, about 9 o'clock A. M., and when the man in the next chamber called to see him about 12 o'clock, he found him lying under a piece of roof rock, dead.



November 24, Joseph Kosloski, Lithuanian, laborer, was killed at Mount Lookout Colliery of the Temple Iron Company, in the Marcy vein. He was loading a car when a piece of rock fell on him without warning.

November 26, Stanley Lipski, Polish, miner, was instantly killed at the Mount Lookout Colliery of the Temple Iron Company, in the Marcy vein. He was taking down some bony coal and, while so doing, a piece of the roof fell on him.

### Cars

January 6, Martin Bartori, Polish, laborer, was fatally injured at Kingston No. 3 Colliery, Kingston Coal Company. He was unloading boiler fuel into a chute near the head of No. 3 Shaft, and while pushing in a loaded car, he got into a small space between the tracks and was squeezed between cars. Outside.

March 23, William Salamonica, Russian, driver, was killed at No. 1 Shaft of the Kingston Coal Company. He was caught between the top of a loaded car and a door frame. His skull was fractured. The accident occurred in the Orchard vein.

May 29, Michael Ritz, Polish, sandboy, was fatally injured at Stevens Colliery, Stevens Coal Company. He was standing near the end of the passing branch in the fifth vein, waiting for the loaded cars to be run on to the branch, when the cars jumped the track, squeezing him between them and the rib of the gangway.

August 1, Thomas Minnis, English, mine foreman, was instantly killed at the Forty-Fort Colliery, of the Temple Iron Company, in the eleven foot slope. He was coming up the slope when a trip of empty cars ran away from the head. He stepped behind a prop but the cars struck it, knocking him against the rib.

September 24, Thomas Keegan, American, brakeman, was fatally injured at No. 2 Colliery, Kingston Coal Company. He was employed as brakeman on a locomotive hauling coal from No. 1 Slope to the breaker. As the cars crossed the trestling over the back road they jumped the track, carrying him down with them, a distance of about 14 feet. He died a short while after the accident.

September 29, Michael Leges, Slavonian, miner, was fatally injured at the Maltby Colliery, Lehigh Valley Coal Company, at the top of the 11 foot haulage slope. He was going to work on the night shift, and instead of going down the manway, he went down the slope. The front car struck him, squeezing him between the car and the sheave wheel.

November 22, Charles Williams, Welsh, fire-boss, was fatally injured at Clear Spring Colliery, Clear Spring Coal Company. He was standing on the side of No. 1 Slope in the Pittston vein when a car came along. The runner put the usual number of sprags in the car but it jumped the track at the frog, and Williams was struck, before he could get out of the way, by a prop that stood between the two tracks.

December 10, Anthony Kodiski, Polish, laborer, was fatally injured at the East Boston Colliery, of the East Boston Coal Company. He was cleaning the tracks under the breaker, of the clippings, but was outside of the tracks and the breaker. The loader was running



down a car to load it; the brake refused to work, and the car ran away. Kodiski was struck by it and died at the Mercy Hospital same day.

### Premature Blasts

February 3, Adam Savekies, Polish, miner, was instantly killed at Mount Lookout Colliery, Temple Iron Company. When he was tamping a hole the powder exploded, and he received the full contents of the charge in his face and chest.

July 23, Richard E. Jones, Welsh, miner, was fatally injured at No. 1 Shaft of the Kingston Coal Company. He was firing a hole in his working place, east gangway, Lance vein. After he touched the match, just as he turned around to run away from the shot, the blast went off. The accident was due to a defective squib or else to his shortening the match.

August 13, Joseph Yotka, Polish, miner, was fatally injured at No. 1 Shaft, Maltby Colliery, Lehigh Valley Coal Company. He was apparently pushing the powder into the hole when it exploded, blowing out a lump of coal that struck him in the face.

December 21, Martin Brisk, Polish, miner, was instantly killed at Westmoreland Colliery, Lehigh Valley Coal Company. He was in the act of firing a hole when the blast went off. His body was thrown twenty feet by the force of the explosion, and was badly mangled.

### Explosions of Gas

October 12, William Gibinsky, Russian, laborer, was fatally injured at No. 2 Shaft of the Exeter Colliery, Lehigh Valley Coal Company. He was burned by an explosion of gas in the Red Ash vein, about 2.30 P. M. It is supposed that a door was left open in the chamber, thus allowing gas to accumulate. He died October 25 at the Pittston Hospital.

### Explosions of Powder

November 7, Joseph Viscavage, Lithuanian, miner, was fatally injured at East Boston Colliery, East Boston Coal Company. While he was making up a charge of powder, a spark from his lamp, dropped into the keg, causing an explosion. He was burned so badly that he died at the Wilkes-Barre City Hospital, November 14.

### Machinery

November 13, John Linshinski, American, slate picker, was instantly killed at Westmoreland Colliery, Lehigh Valley Coal Company. He was employed at the top of new broken coal spirals. The coal from there goes to the No. 2 merchant rolls. The chute was blocked and he went down over the spirals to start the coal. He raised the covering over the rolls, and went back the same way, leaving the covering off. When near the top he lost his footing, dropped down into the rolls before the machinery could be stopped and was ground to pieces.

November 26, Burt Cruickshank, American, reelman on motor, was instantly killed at Mount Lookout Colliery, Temple Iron Company. He was employed to attend to the reel wire on the electric motor in No. 6 slope, Marcy vein. He apparently made a mistake in hooking on the lead wire and fell under the motor.

### Miscellaneous

July 6, John Onderko, Slavonian, laborer, was fatally injured at Maltby Colliery, Lehigh Valley Coal Company. He was employed as a laborer around the breaker. He was walking over a trestling or bridge, leading from the breaker to the foot of the plane and fell off, a distance of about 8 feet. Outside.

October 27, Joseph Mackin, American, breaker oiler, was fatally injured at Exeter Colliery, Lehigh Valley Coal Company. He was leaving the oiler's room, about 5.45 P. M., after oiling the machinery and looking it over, when a cyclone struck the breaker, causing the tower hoistway, the mud screen and the belt rooms to collapse. Mackin was pinned fast among the debris. Rescuing parties worked heroically to liberate him. It was eleven hours before he was found. He died about 3 P. M. on the 28th. Everything that was possible was done for him.

November 11, Joseph Bessermey, Slavonian, platform man, was fatally injured at Maltby Colliery, Lehigh Valley Coal Company. He was helping to tear out some chutes in the breaker, and was running the plank out through the window. He stepped back where there was an opening left over the belt room, and fell through it. This opening was guarded by railing, but he went over the railing.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

### KINGSTON COAL COMPANY

Completed the second half of 2,400 H. P. boiler plant.

Installed Norwalk compressor, capacity 2,400 cubic feet per minute; fire pump and fire lines around plant and breaker, compound duplex Goyne pump 28x18x10x36 inches; bore hole to surface through which to pump water. Erected warehouse and office.

Kingston No. 2 Colliery.—Culm hole at breaker for flushing culm into workings. Condition of collieries is good.

### TEMPLE IRON COMPANY

Harry E. Colliery.—The new breaker which was practically completed in 1905, was placed in operation on July 23, and is working very satisfactorily. The breaker tracts were graded and relaid. New scales, both empty and loaded, were installed. A new shaft head frame was erected and self-dumping cages installed. Portions of the shaft cribbing and buntons were renewed, and 4½x11 inch guides placed in the shaft to replace the old 6x8 inch guides. A concrete retaining wall was built around the head of the shaft in place of the old wooden cribbing.

A new carpenter, blacksmith and machine shop was built. This is a concrete building, 56 feet 6 inches x 28 feet. The foundation is made of concrete, 21 inches thick. The building walls are 8 inches

thick; there are two 8 inch concrete partitions which divide the building into three equal parts. The roof trusses are made of steel, with steel purlines and covered with galvanized steel roofing.

Road 24, in the Red Ash vein, was re-opened and 1,400 feet of track laid from the main slope to face of gangway. This gangway was continued through the rock a distance of 150 feet, striking the Red Ash vein on the easterly side of the fault. This gangway is now connected with workings on Road 28 and is a decided improvement in both transportation and ventilation.

No improvements at Mount Lookout and Forty Fort worth mentioning. Condition of collieries is good.

#### LEHIGH VALLEY COAL COMPANY

Exeter Colliery.—New self-acting gravity plane in operation between the Babylon and Red Ash veins. This dispenses with the upper landing in the Red Ash shaft.

The air motor haulage has been extended 2,000 feet and the feeding locomotives are now in service.

A new permanent brick arch bridge completed in South district, Red Ash vein.

A new permanent concrete air bridge completed in Marcy vein Pittston shaft.

The old wooden crib in Pittston shaft replaced by concrete, with new buntings and concrete connections to fan.

New engine installed driving Pittston fan.

On October 27 the Exeter breaker was practically destroyed by a cyclone or tornado sweeping up the Wyoming Valley. Work was immediately started cleaning away the debris and rebuilding, so that at the close of the year the new structure was almost completed and coal expected to be running through the breaker by the middle of January. During this interval an entirely new arrangement of tracks was made entailing 1,500 feet of grading and 2,000 feet of tracks, giving a safer means of transportation around the head of the Pittston shaft.

The position of the tower hoist engines has been changed, as well as the location of the breaker engine, both being closer to the breaker, thus avoiding any danger of conflict in the transmission power ropes, etc. The new buildings for these engines are of concrete with iron trusses and corrugated roofs.

All that remains of the old structure, practically speaking, are the pockets and the main screen room over the pockets. In the new structure every provision has been made for light, convenience and safety of the workmen. The timbers are of yellow pine, post and bracket structure resting upon concrete foundations.

A new 30 K. W. generator has been installed for illuminating purposes, in the breaker, yard, buildings and shafts.

New conveyor lines were extended and the old culm banks on the south side of the property are being regulated in the Exeter washery.

A new arrangement of tracks has been made at the head of the Red Ash shaft to avoid any possible contact with the hoist ropes.

The surface test holes to determine safe rock cover working, limit of Checker vein, have been continued throughout the year.



New fuel conveyor lines have been installed between the washery and the boiler house.

The conveyor between the breaker and the washery entirely rebuilt. Condition of colliery is good.

Westmoreland Colliery.—Series of test holes have been continued to prove the safe working rock cover over the Pittston vein.

Finished the installation of 300 H. P. Stirling boilers.

Enclosed the concrete house with corrugated iron roofing.

A new duplex pump 26x10x36, has been installed in the Marcy vein, discharging through a 10 inch column bore hole to the surface.

Steam and exhaust bore holes were completed from surface to the centrifugal pump station.

Drainage bore holes completed from Pittston to Marcy vein.

A new rope hole from surface to Pittston vein No. 1 inside slope with hoist engine on the surface.

The No. 1 Pittston vein inside slope has been extended 2,000 feet.

Number 5 Slope inside Pittston vein extended 800 feet.

Number 3 Marcy vein slope extended 1,200 feet.

Number 4 Slope Marcy vein extended 1,200 feet.

New mechanical pickers installed in breaker.

Rope hole is under construction from surface to Marcy vein.

Engines to be placed on the surface and removed from inside.

Considerable attention has been given to regrading the slopes and laying them with 40 pound rails.

New batteries and ventilating walls constructed, and roads given thorough attention to bring the colliery up to an efficient standard.

A new rope haulage engine installed on surface between foot of breaker plane and inside slope. The condition of the colliery is fair.

Maltby Colliery.—Three permanent concrete overcasts finished in Marcy vein.

Finished the installation of new centrifugal pump plant 175 K. W. with 500 volt generator with engine for same.

New bore hole and pipe line for silting in 6 foot and Marcy veins, location of bore hole being at foot of breaker.

Silting has been extensively carried on at this colliery during the past year in the Marcy vein.

A new head frame is under construction for the No. 2 Main Hoist shaft.

New conical drums were placed on hoisting engine.

Concrete lamp house for inside foreman's office.

A series of diamond drill holes were bored through the pillar in the No. 2 shaft to test the level of the standing water in the old Maltby 6 foot vein, with a view of tapping the standing water and bringing all the water to the central pump station at the foot of the No. 2 shaft.

The storm of October 27 did considerable damage at this colliery, blowing down all the stacks, the boiler fuel conveyor and a large portion of the steam lines. Repairs, however, were quickly made, and little time was lost in the operation of the mine. The condition of the colliery is good.

#### CLEAR SPRING COAL COMPANY

There were no particular improvements made at this colliery during the year. The general condition of the colliery is good.

## STEVENS COAL COMPANY

Inside.—Extended electric haulage road in west gangway 1,800 feet; extended electric motor haulage road through No. 1 tunnel into fifth vein 900 feet long.

Rock tunnel 160 feet long was driven from bottom of west side slope to fifth vein and another rock cut opening to fifth vein on line of Red Ash vein, main slope.

A 6 inch bore hole was put down from the surface to the Ross vein 120 feet deep, to fill a portion of the Marcy vein working with silt from the breaker; about 7 acres of this was filled and about 17 acres of working in Red Ash was filled with silt; and a line of 4 inch pipe 3,000 feet long had to be laid to the workings for this purpose.

The mule barn in Red Ash vein had to be rebuilt and refitted on account of bad roof over it, which had to be taken down.

An engine was put up on the new slope in the Ross vein and a slope and an airway was driven down 140 feet.

An engine had been replaced on top of the old inside Simonson slope, Red Ash vein, on the east end of the property.

A passing branch 300 feet long was fitted up at the lower end of Marcy slope and a rock cut was made on top of this slope to reduce the heavy grade.

On the west end of the property 15 bore holes containing 975 lineal feet were made by driving 3 inch pipe to locate the elevation of the rock over the veins of coal and depth of surface.

Outside.—A concrete retaining wall 3 feet x 8 feet x 80 feet long was built at the entrance to the main slope to replace the old wooden cribbing.

A 12 foot x 16 foot x 15 foot concrete foundation was put up at the back of the breaker to contain the shafting of the shaker screens.

A wash house 16 feet x 18 feet, two-story high, was erected and bath tubs and lockers provided for the inside and outside workmen.

An engine shed was built outside to shelter the locomotive from the weather.

Concrete foundations were built on both sides of Carpenter's creek to replace the truss work for the 6 inch steam pipe that was torn down by the wind, so that a good portion of this truss work will be done away with and rock filling take its place.

Two new spiral pickers were placed in the breaker.

Condition of the colliery is good.

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—Inside.—One 7x12x248 foot rock tunnel has been driven from Hillman vein to Hillman vein for ventilation and development, this being necessary on account of the gaseous condition of this seam.

Outside.—A 250 K. W. belt driven generator has been installed at this colliery, which will furnish electric motive power for the 10 ton locomotive to be operated in the Hillman vein.

## RAUB COAL COMPANY

The only improvement here is they are driving a tunnel from bottom split, Ross vein, to top split of same vein, in Mt. Thomas, Ross Slope, a distance of about 100 feet. The tunnel, which they have



been driving from Ross to Red Ash vein at Mt. Thomas, is stopped for the present, in order to test the measures.

During the year a plane, 1,200 feet long, was driven in Red Ash vein, at Mt. Thomas, in order to bring the coal from top of mountain. This together with the driving of the tunnel mentioned, was all the new work projected for the year, inside. Outside, a new Pea coal jig, Hazleton Iron Works pattern, was added to breaker equipment. The condition of the colliery is fair.

#### PEOPLES BANK OF WILKES-BARRE, RECEIVER

Black Diamond Colliery.—No improvements during the year. Condition of the colliery, fair.

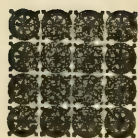
#### EAST BOSTON COAL COMPANY

No improvements during the year. Condition of the colliery, fair.

#### TROY COAL COMPANY

Haulage engine and ropes were placed at the breaker for transporting both loaded and empty cars from the interior of the mine or tunnel to head of breaker, a distance of nearly 4,000 feet, thus doing away with a number of men and mules. The tunnel was reopened and timbered. A 5 inch steam line was laid from the breaker to the Red Ash vein in the mine to operate and sink two slopes one in the Clark vein and the other in the Red Ash vein. Two Knowles pumps were also installed to take care of the water, and two hoisting engines inside the mines to hoist from the above slopes.

They also drove a tunnel from the 30 inch vein to the Clark vein to reach a track of coal which was left, and an air shaft for a second opening for the Red Ash vein and traveling-way in case of emergency; also an air shaft and traveling-way in the Marcy vein. They are now making preparations for a fan, which is on the way. They have placed in addition to their boiler plant one large upright boiler 175 H. P. alongside of the two new return tubular boilers, which they installed sometime ago in the place of the two cylinder boilers. Also a new conveyor line and engine to convey the coal and culm from the bank to the elevator of the breaker; and a new main elevator was also installed in the breaker, 5 new spiral pickers, with three elevators and two conveyor lines for the same. Condition of colliery, fair.



# Ninth District

LUZERNE COUNTY

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Wilkes-Barre, Pa., February 20, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Ninth Anthracite District, for the year ending December 31, 1906. The report gives the statistical information as required by law, and also a tabulated and brief description of the fatal and non-fatal accidents that occurred during the year, with other useful information.

Respectfully submitted,

D. T. DAVIS,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	14
Number of mines, .....	28
Number of mines in operation, .....	28
Number of tons of coal shipped to market, .....	4,111,504
Number of tons used at mines for steam and heat, .....	401,761
Number of tons sold to local trade and used by employes, .....	63,176
Number of tons produced, .....	4,576,441
Number of persons employed inside of mines, .....	6,603
Number of persons employed outside, .....	2,403
Number of fatal accidents inside of mines, .....	38
Number of fatal accidents outside, .....	1
Number of non-fatal accidents inside of mines, .....	59
Number of non-fatal accidents outside, .....	6
Number of tons of coal produced per fatal accident inside, .....	120,433
Number of persons employed per fatal accident inside, ..	174
Number of persons employed per fatal accident outside, ..	2,403
Number of persons employed per non-fatal accident inside, ..	112
Number of persons employed per non-fatal accident outside, .....	400
Number of wives made widows, .....	26
Number of children orphaned, .....	51
Number of steam locomotives used inside of mines, ....	2
Number of steam locomotives used outside, .....	4
Number of compressed air locomotives used inside, .....	3
Number of electric motors used inside, .....	13
Number of fans in use, .....	29
Number of gaseous mines in operation, .....	25
Number of non-gaseous mines in operation, .....	3
Number of new mines opened, .....	1
Number of old mines abandoned, .....	1

TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Delaware and Hudson Company, .....	1,180,897
Lehigh and Wilkes-Barre Coal Company, .....	1,148,156
Delaware, Lackawanna and Western Railroad Company, .....	977,317
Parrish Coal Company, .....	517,305
Plymouth Coal Company, .....	159,758
Kingston Coal Company, .....	100,332
George F. Lee Coal Company, .....	52,761
North American Coal Company, .....	199,641
Old Plymouth Coal Company, .....	187,724
West Nanticoke Coal Company, .....	52,550
Total, .....	<u>4,576,441</u>

## Production by Counties

Luzerne, .....	<u>4,576,441</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh and Wilkes-Barre Coal Co., .....	12	.....	12	19	1	20	95,680	60,429	1,382	448	1,830	115	.....	73	448
Delaware and Hudson Co., .....	4	1	5	6	1	7	235,224	107,354	2,016	728	2,744	504	728	183	728
Delaware, Lackawanna and Western Railroad Co., .....	8	.....	8	11	3	14	122,165	88,847	1,716	389	2,096	215	.....	156	127
Parrish Coal Co., .....	13	.....	13	16	1	17	32,331	32,331	966	402	1,358	74	.....	59	402
Kingston Coal Co., .....	1	.....	1	2	.....	2	50,166	50,166	149	98	247	.....	.....	75	.....
Plymouth Coal Co., .....	.....	.....	.....	.....	.....	.....	159,758	.....	262	131	393	262	.....	.....	.....
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	.....	122	216	338	.....	.....	.....	.....
Totals and averages for district, .....	38	1	39	39	6	65	120,433	77,567	6,603	2,403	9,006	174	2,403	112	400

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
<b>Causes of Accidents Inside</b>													
Falls of coal, .....	1						1			1	2	1	5
Falls of slate, .....										2	2		4
Falls of roof, .....		1											1
Mine cars, .....					1	5				2			8
Explosions of gas and dust, .....					2	1	3			1			7
Suffocation by gas, etc., .....													3
Explosions of powder and dynamite, .....		4											4
Premature blasts, .....										1			1
By mules, .....			1										1
Miscellaneous, .....		1										1	2
<b>Totals, .....</b>	<b>1</b>	<b>6</b>	<b>1</b>		<b>3</b>	<b>6</b>	<b>4</b>			<b>5</b>	<b>4</b>	<b>8</b>	<b>38</b>
<b>Causes of Accidents Outside</b>													
Miscellaneous, .....						1							1
<b>Totals, .....</b>						<b>1</b>							<b>1</b>
<b>Grand totals inside and outside, .....</b>	<b>1</b>	<b>6</b>	<b>1</b>		<b>3</b>	<b>7</b>	<b>4</b>			<b>5</b>	<b>4</b>	<b>8</b>	<b>39</b>

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
<b>Causes of Accidents Inside</b>													
Falls of slate, .....	2	3				1	1		1		1		7
Falls of roof, .....	1		2			1	3	2		1		3	14
Mine cars, .....	1	1	1		7	2	4		1	3		10	29
Explosions of gas and dust, .....													1
Explosions of powder and dynamite, .....		1	1			1							3
Premature blasts, .....		1				2	1						4
Miscellaneous, .....													
<b>Totals, .....</b>	<b>4</b>	<b>5</b>	<b>5</b>		<b>7</b>	<b>6</b>	<b>9</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>13</b>	<b>59</b>
<b>Causes of Accidents Outside</b>													
Cars, .....	1								1			1	3
Miscellaneous, .....	1					1		1					3
<b>Totals, .....</b>	<b>2</b>					<b>1</b>		<b>1</b>	<b>1</b>			<b>1</b>	<b>6</b>
<b>Grand totals inside and outside, .....</b>	<b>6</b>	<b>5</b>	<b>5</b>		<b>7</b>	<b>7</b>	<b>9</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>14</b>	<b>65</b>

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	1	...	1	...	2	1	1	...	...	1	1	2	10
Miners' laborers, .....	...	...	...	...	...	1	3	...	...	3	3	4	14
Doorboys and helpers, .....	...	1	...	...	...	1	...	...	...	1	...	...	3
Company men, .....	...	5	...	...	1	3	...	...	...	...	2	...	11
Totals, .....	1	6	1	...	3	6	4	...	...	5	4	8	38
Outside													
Slatepickers (boys), .....	...	...	...	...	...	1	...	...	...	...	...	...	1
Totals, .....	...	...	...	...	...	1	...	...	...	...	...	...	1
Grand totals inside and outside, ...	1	6	1	...	3	7	4	...	...	5	4	8	39

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Assistant mine foremen, .....			1		5	1	4	1	1	2		1	1
Miners, .....		2										4	21
Miners' laborers, .....	3	3				2	2					4	19
Drivers and runners, .....	1		1				1			1	1	4	8
Company men, .....					2	1	2	1	2			2	10
Totals, .....	4	5	5		7	6	9	2	3	4	1	13	59
Outside													
Slatepickers (boys), .....						1		1					2
All other employees, .....	2								1			1	4
Totals, .....	2					1		1	1			1	6
Grand totals inside and outside, ....	6	5	5		7	7	9	3	4	4	1	14	65

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....		3				2				1		
English, .....		1				3	1				1	
Welsh, .....	1											1
Irish, .....		2			1							
German, .....												1
Polish, .....			1			2	2			2	2	3
Italian, .....										1		
Slavonian, .....							1					
Lithuanian, .....										1	1	
Russian, .....					1	1						3
Swedish, .....												
Totals, .....	1	6	1		3	7	4			5	4	4

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....	1		1		2	3	2	1		1		3
English, .....		1					1		1			2
Welsh, .....	1						1					4
Irish, .....						2						1
German, .....			1									3
Polish, .....	2	3	2		3	1	3	2	1	1		1
Italian, .....	1											
Slavonian, .....					1				1			
Lithuanian, .....			1		1		1			1		4
Austrian, .....	1					1						1
Russian, .....		1					1		1	1	1	2
Totals, .....	6	5	5		7	7	9	3	4	4	1	14

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Lehigh and Wilkes-Barre Coal Co.	Shaft,....	Gaseous,	Fan,....	24	7.10	6	70	....	Guibal,	Steam,	....	....	....	....	....	....	....
Nottingham, .....	Shaft,....	Gaseous,	Fan,....	24	8	6	70	....	Guibal,	Steam,	....	....	....	....	....	....	....
	Shaft,....	Gaseous,	Fan,....	24	8	6	70	....	Guibal,	Steam,	....	....	....	....	....	....	....
Lance No. 11, .....	Shaft,....	Gaseous,	Fan,....	34.3	10.11	8.4	49	....	Guibal,	Steam,	....	....	324,000	236,000	372,000	439	555
	Shaft,....	Gaseous,	Fan,....	35	11.9	8.9	49	....	Guibal,	Steam,	....	....	....	....	....	....	....
	Shaft,....	Gaseous,	Fan,....	35	11.9	8.9	49	....	Guibal,	Steam,	....	....	390,000	280,000	480,000	454	617
Reynolds, .....	Slope,....	Gaseous,	Fan,....	23.9	5.7	5.10	68	....	Guibal,	Steam,	....	....	101,000	53,000	102,000	197	269
Delaware and Hudson Co.	Shaft,....	Gaseous,	Fan,....	22	6	6.6	85	....	Guibal,	Steam,	1.8	9	260,000	212,000	315,000	420	505
Boston, .....	Shaft,....	Gaseous,	Fan,....	28	10	7.10	60	....	Guibal,	Steam,	2.6	....	....	....	....	....	....
Plymouth No. 3, .....	Drift,....	Gaseous,	Fan,....	17	4	4	90	....	Guibal,	Steam,	1.2	....	....	....	....	....	....
	Slope,....	Gaseous,	Fan,....	17	4	4	90	....	Guibal,	Steam,	1.2	....	....	....	....	....	....
Plymouth No. 2, .....	Drift,....	Gaseous,	Fan,....	23	10	7.6	65	....	Guibal,	Steam,	3.4	9	340,000	296,000	375,000	488	605
	Shaft,....	Gaseous,	Fan,....	23	10	7.6	80	....	Guibal,	Steam,	2.1	13	223,000	204,000	254,000	454	470
Plymouth No. 5, .....	Shaft,....	Gaseous,	Fan,....	22	5	6.6	75	....	Guibal,	Steam,	1.7	8	160,000	148,000	164,000	282	524
Plymouth No. 4, .....	Shaft,....	Gaseous,	Fan,....	22.6	5	6.6	75	....	Guibal,	Steam,	1.5	7	122,000	115,000	127,000	200	575
	Shaft,....	Gaseous,	Fan,....	17	4	4	130	....	Guibal,	Steam,	1.5	....	....	....	....	....	....



Delaware, Lackawanna and Western Railroad Co.	Woodward,	Shaft,....	Gaseous,	Fan,....	16	5	6.3	105	.....	Dickson,	.....	Steam,	1.5	.....	.....	.....	.....	.....	.....
		Shaft,....	Gaseous,	Fan,....	16	5.8	6.3	105	.....	Dickson,	.....	Steam,	2	.....	.....	.....	.....	.....	.....
		Shaft,....	Gaseous,	Fan,....	20	6	6	95	.....	Dickson,	.....	Steam,	1.5	.....	.....	.....	.....	.....	.....
	Avondale,	Fan,....	35	9	10	52	.....	Dickson,	.....	Steam,	2	24	334,000	200,000	356,000	800	325	.....	.....
		Shaft,....	Gaseous,	Fan,....	16	5	4	100	.....	Dickson,	.....	Steam,	.95	.....	.....	.....	.....	.....	.....
		Shaft,....	Gaseous,	Fan,....	16	5	4	105	.....	Dickson,	.....	Steam,	.75	9	184,000	161,000	188,000	329	489
	Parrish,	Slope,....	Gaseous,	Fan,....	24	8	7.4	70	2.1	Guibal,	.....	Steam,	.....	.....	.....	.....	.....	.....	.....
		Shaft,....	Gaseous,	Fan,....	20	5.8	5.8	80	2.1	Guibal,	.....	Steam,	.....	10	126,000	108,000	127,000	309	350
		Shaft,....	Gaseous,	Fan,....	24	5.8	5.8	80	.....	Guibal,	.....	Steam,	.....	.....	.....	.....	.....	.....	.....
	Plymouth Coal Co.	Shaft,....	Gaseous,	Fan,....	35	11.9	10.8	48	2	Vulcan,	.....	Steam,	.....	17	267,000	230,000	309,000	529	435
Kingston Coal Co.		Shaft,....	Gaseous,	Fan,....	20	6.5	5.6	92	2	Guibal,	.....	Steam,	.....	7	103,000	84,000	104,000	207	486
		Gaylord,	Slope,....	Gaseous,	Fan,....	25	8	7	60	1.1	Guibal,	.....	Steam,	.....	5	64,000	27,000	66,000	106
	George F. Lee Coal Co.	Shaft,....	Non-gas,	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chauncey,		Slope,....	Non-gas,	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Drift,....	Non-gas,	Natural,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
														3	42,000	28,000	45,000	53	528



TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co.												
Plymouth No. 2, .....	{ Luzerne,..... }	211,137	33,690	.....	244,797	204	686	1	5	7,622	2,302	82
Plymouth No. 3, .....		272,884	19,794	3,919	296,597	200	636	1	1	8,352	1,129	90
Plymouth No. 4, .....		293,001	51,439	4,716	349,147	182	285	2	1	3,532	763	51
Plymouth No. 6, .....		256,353	25,818	.....	281,141	184	652	3	3	4,931	566	33
Boston, .....		1,032,315	130,702	8,635	1,171,682	.....	2,744	5	12	8,562	1,133	76
Plymouth washery, .....	Luzerne,.....	9,215	.....	.....	9,215	27	†	.....	.....	32,999	5,833	332
Totals, .....		1,041,560	130,702	8,635	1,180,897	.....	2,744	5	12	32,999	5,833	332
Lehigh and Wilkes-Barre Coal Co.												
Lance No. 11, .....	{ Luzerne,..... }	338,935	29,269	2,159	370,366	208	632	2	12	10,861	38,089	110
Nottingham, .....		567,380	48,572	4,497	620,440	223	883	7	8	12,838	5,788	127
Reynolds, .....		139,479	17,832	30	157,341	188	314	3	.....	2,969	2,872	70
Totals, .....		1,045,797	95,673	6,686	1,148,156	.....	1,830	12	20	26,688	46,749	307
D. L. and W. R. R. Co.												
Woodward, .....	{ Luzerne,..... }	670,009	51,653	5,960	727,622	222	1,490	6	11	18,469	12,268	117
Avondale, .....		216,208	31,950	1,507	249,695	238	606	2	3	4,953	6,197	56
Totals, .....		886,217	83,603	7,467	977,317	.....	2,096	8	14	23,422	18,465	173

\*Coal taken through Plymouth No. 5.

†Included with employes for Plymouth No. 2.

TABLE 2.— Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Parrish Coal Co.	Luzerne.....	192,289	18,000	6,610	216,929	185	595	4	4	5,487	79,995	98
Buttonwood, .....		271,210	18,990	11,166	300,376	185	763	9	13	10,618	20,425	130
Totals, .....		463,499	36,990	17,806	517,305	.....	1,358	13	17	16,105	100,350	228
Plymouth Coal Co.	Luzerne.....	136,860	20,000	2,838	159,758	187	393	1	.....	2,469	3,334	47
Dodson, .....												
Kingston Coal Co.	Luzerne.....	93,044	5,892	1,486	100,332	148	247	.....	2	3,220	457	42
Gaylord, .....												
George F. Lee Coal Co.	Luzerne.....	45,641	5,000	1,120	52,761	169	170	.....	.....	1,200	3,600	24
Chauncey, .....												
North American Coal Co.	Luzerne.....	181,123	8,751	9,767	199,641	235	60	.....	.....	.....	.....	3
Plymouth washery, .....												
Old Plymouth Coal Co.	Luzerne.....	166,799	14,000	6,925	187,724	218	80	.....	.....	.....	.....	.....
Old Plymouth washery, .....												
West Nanticoke Coal Co.	Luzerne.....	49,964	2,200	386	53,550	186	28	.....	.....	.....	.....	.....
West Nanticoke washery, .....												
Grand totals, .....		4,111,504	401,761	68,176	4,576,441	.....	9,006	39	65	106,103	187,818	1,156

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co., .....	{ Luzerne, .....	1,041,560	130,702	8,625	1,180,897	.....	2,744	5	12	32,999	5,832	332
Lehigh and Wilkes-Barre Coal Co., .....		1,045,737	95,673	6,688	1,148,156	.....	1,830	12	20	24,688	46,749	307
Delaware, Lackawanna and Western Railroad Co., .....		836,217	83,623	7,467	977,317	.....	2,096	8	14	23,422	18,495	173
Parrish Coal Co., .....		463,499	36,000	17,806	517,305	.....	1,358	13	17	16,105	106,350	228
Plymouth Coal Co., .....		136,860	20,000	2,898	159,758	.....	393	1	.....	2,469	3,334	47
Kidston Coal Co., .....		33,044	5,802	1,466	100,332	.....	247	.....	2	3,220	457	42
George F. Lee Coal Co., .....		46,641	5,000	1,120	52,761	.....	170	.....	.....	1,200	3,600	24
North American Coal Co., .....		181,123	8,751	9,767	199,641	.....	60	.....	.....	.....	.....	3
Old Plymouth Coal Co., .....		166,709	14,000	6,925	187,724	.....	80	.....	.....	.....	.....	.....
West Nanticoke Coal Co., .....		49,964	2,200	386	52,550	.....	28	.....	.....	.....	.....	.....
Totals, .....	.....	4,111,504	401,761	63,176	4,576,441	.....	9,006	39	65	106,103	187,818	1,156



TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Total horse power	Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Delaware and Hudson Co., .....	Luzerne,	117	3,520	9	1,900	5,420	6	.....	.....	192	12,696	7	9,800	2,500	2	6
Lehigh and Wilkes-Barre Coal Co., .....		6	396	24	5,288	5,684	.....	3	.....	117	7,614	3	3,920	3,100	.....	7
Delaware, Lackawanna and Western Railroad Co., .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Parrish Coal Co., .....		.....	880	18	4,125	4,405	.....	.....	13	54	6,074	7	10,600	4,400	4	.....
Plymouth Coal Co., .....		18	720	23	3,800	4,620	.....	.....	.....	46	7,951	2	2,167	1,452	.....	.....
Kingsford Coal Co., .....		.....	.....	12	2,000	2,000	.....	.....	.....	12	1,500	8	2,100	674	1	.....
George F. Lee Coal Co., .....		23	635	.....	.....	635	.....	.....	.....	1	254	1	192	72	.....	1
North American Coal Co., .....		.....	.....	3	410	410	.....	.....	.....	1	250	.....	.....	.....	.....	.....
Old Plymouth Coal Co., .....		.....	.....	6	560	560	.....	.....	.....	13	400	.....	.....	.....	.....	.....
West Nanticoke Coal Co., .....		.....	.....	3	500	500	.....	.....	.....	3	400	.....	.....	.....	.....	.....
Totals, .....		172	5,541	106	18,933	24,474	6	3	13	454	37,889	29	29,579	12,998	7	21

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Col- lieries	County	Inside										Outside							Grand total inside and outside				
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employees	Total outside	
Delaware and Hudson Co. Plymouth No. 2, .....	{ Luzerne,..... }	1	1	7	152	165	51	22	5	63	31	498	....	1	6	22	46	30	2	81	188	686	
		1	1	6	209	106	77	27	....	34	22	483	....	1	6	21	31	45	2	67	172	656	
		1	....	4	87	69	31	8	....	1	25	30	256	....	1	....	9	....	....	....	17	29	285
		1	1	3	109	66	41	10	1	30	32	288	....	1	8	15	50	38	2	53	167	455	
		1	1	4	148	189	72	16	2	37	21	491	....	1	6	14	61	17	2	70	171	662	
Totals, .....		5	4	24	705	889	272	83	9	189	136	2,016	....	5	28	81	188	130	8	288	778	2,741	
Lehigh and Wilkes-Barre Coal Co. Lance No. 11, .....	{ Luzerne,..... }	1	1	7	168	122	52	34	5	76	12	478	....	1	6	26	50	19	3	50	155	633	
		1	2	8	289	212	66	15	7	69	36	696	....	1	12	30	37	10	4	93	187	883	
		1	1	2	49	65	36	8	....	46	....	208	....	1	4	13	40	8	2	38	106	314	
		3	4	17	497	389	154	57	12	191	48	1,382	....	3	22	69	127	37	9	181	448	1,830	
		Totals, .....																					
D., L. and W. R. R. Co. Woodward, Avondale, .....	{ Luzerne,..... }	2	3	9	388	385	95	51	6	280	....	1,220	....	2	24	23	29	8	4	170	260	1,490	
		1	1	3	128	167	52	13	9	....	112	486	....	1	6	14	40	....	1	58	130	606	
		3	4	12	517	562	147	64	15	280	112	1,716	....	3	30	37	69	8	5	228	380	2,096	
		Totals, .....																					
		Parrish Coal Co. Buttonwood, Totals, .....	{ Luzerne,..... }	1	2	5	134	106	46	24	4	38	51	411	....	3	1	7	23	45	41	5	59
1	2	6		187	121	72	31	3	59	63	545	....	2	0	23	44	46	4	90	218	763		
2	4	11		321	297	118	55	7	97	114	956	....	3	3	16	46	89	87	9	149	402	1,358	

TABLE 3.—Continued

Names of Operators and Col- lieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Five bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Plymouth Coal Co.	Luzerne,.....	1	1	3	71	67	33	16	6	34	30	262	1	1	6	19	48	.....	2	54	181	393
Dodson, .....	Luzerne,.....	1	1	1	50	35	24	5	.....	22	11	149	1	1	8	10	14	3	1	60	98	247
Kingston Coal Co.	Luzerne,.....	1	1	1	38	48	8	5	.....	14	3	118	.....	1	3	4	15	8	1	20	52	170
George F. Lee Coal Co.	Luzerne,.....	1	1	1	38	48	8	5	.....	14	3	118	.....	1	2	9	9	.....	1	38	60	60
Chauncey, .....	Luzerne,.....	1	1	1	38	48	8	5	.....	3	.....	*4	1	1	1	4	13	14	1	41	76	80
North American Coal Co.	Luzerne,.....	1	1	1	38	48	8	5	.....	3	.....	.....	.....	1	1	5	4	3	1	13	28	28
Plymouth washery, .....	Luzerne,.....	1	1	1	38	48	8	5	.....	3	.....	.....	.....	1	1	5	4	3	1	13	28	28
Oly Plymouth Coal Co.	Luzerne,.....	1	1	1	38	48	8	5	.....	3	.....	.....	.....	1	1	5	4	3	1	13	28	28
Old Plymouth washery, .....	Luzerne,.....	1	1	1	38	48	8	5	.....	3	.....	.....	.....	1	1	5	4	3	1	13	28	28
West Nanticoke Coal Co.	Luzerne,.....	1	1	1	38	48	8	5	.....	3	.....	.....	.....	1	1	5	4	3	1	13	28	28
West Nanticoke washery, .....	Luzerne,.....	1	1	1	38	48	8	5	.....	3	.....	.....	.....	1	1	5	4	3	1	13	28	28
Grand totals, .....	Luzerne,.....	17	17	69	2,199	1,927	756	285	49	830	454	6,603	6	20	117	284	576	290	33	1,072	2,403	9,006

\*Flushing culm.

TABLE 3.—Recapitulation

Names of Operators	County	Inside										Outside										Grand total inside and outside	
		Mine foremen	Assistant mine foremen	Pit bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside		
Delaware and Hudson Co., .....	Luzerne,	5	4	24	765	589	272	83	9	189	136	2,016	....	5	28	81	188	130	8	288	728	2,744	
Lehigh and Wilkes-Barre Coal Co., .....		3	4	17	497	399	154	57	12	191	48	1,382	....	3	22	69	127	37	9	181	448	1,830	
Delaware, Lackawanna and Western Railroad Co., .....		3	4	12	517	562	147	64	15	280	112	1,716	....	3	30	37	69	8	5	228	380	2,096	
Parrish Coal Co., .....		2	4	11	321	227	118	55	7	97	114	956	....	3	16	46	89	87	9	149	462	1,358	
Plymouth Coal Co., .....		1	1	3	71	67	33	16	6	34	30	282	....	1	6	19	48	....	2	54	131	333	
Kingston Coal Co., .....		1	1	1	50	35	24	5	....	22	11	149	....	1	8	10	14	3	1	60	98	247	
George F. Lee Coal Co., .....		1	....	1	38	48	8	....	....	14	3	113	....	1	3	4	15	8	1	20	52	170	
North American Coal Co., .....		....	....	....	....	....	....	....	....	....	....	....	....	1	2	9	9	....	1	38	60	60	
Old Plymouth Coal Co., .....		1	....	....	....	....	....	....	....	3	....	4	....	1	1	4	13	14	1	41	76	80	
West Nanticoke Coal Co., .....		....	....	....	....	....	....	....	....	....	....	....	....	1	1	5	4	3	1	13	28	28	
Totals, .....		17	17	69	2,199	1,927	756	285	49	830	454	6,603	6	20	117	284	576	290	38	1,072	2,403	9,006	

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Delaware and Hudson Co.														
Plymouth No. 2, .....	{ Luzerne,..... }	23	20	15	.....	11	22	23	23	14	14	19	20	204
Plymouth No. 3, .....		20	20	24	.....	12	22	16	11	16	18	21	20	200
Plymouth No. 4, .....		22	19	25	.....	12	23	19	10	5	14	16	17	182
Plymouth No. 5, .....		21	20	23	.....	12	13	5	2	15	16	19	18	184
Boston, .....														
Lehigh and Wilkes-Barre Coal Co.														
Lance No. II, .....	{ Luzerne,..... }	20	18	20	.....	14	25	20	20	15	18	19	19	208
Nottingham, .....		24	22	25	.....	14	24	18	20	16	20	21	19	223
Reynolds, .....		18	15	19	.....	12	20	17	17	15	19	19	17	188
D., L. and W. R. R. Co.														
Woodward, .....	{ Luzerne,..... }	16	16	25	3	20	23	20	20	17	18	23	21	222
Avondale, .....		22	23	25	.....	17	24	20	25	18	22	21	21	238
Parrish Coal Co.														
Parrish, .....	{ Luzerne,..... }	19	18	19	.....	11	19	15	15	14	18	20	17	185
Buttonwood, .....		20	15	19	.....	11	20	15	17	14	18	19	17	185
Plymouth Coal Co.														
Dodson, .....	Luzerne,.....	21	20	22	.....	12	20	18	29	14	10	14	16	187
Kingston Coal Co.														
Gaylord, .....	Luzerne,.....	16	14	17	.....	.....	3	18	21	12	17	15	15	148
George F. Lee Coal Co.														
Chauncey, .....	Luzerne,.....	15	15	19	.....	9	17	14	16	13	16	18	17	169

\*Coal taken through Plymouth No. 5.



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 29	John J. Hanigan, ..	Irish,.....	Miner, .....	47	M. 1	1	6	Dodson, .....	Luzerne,....	Fatally injured by fall of coal. Died at Mercy Hospital, January 25.
Feb. 17	Owen O. Anthony, ..	Welsh,.....	Timberman, ...	45	M. 1	1	8			Instantly killed by an explosion of dynamite.
17	Joseph Mentz, .....	American,...	Timberman, ...	21	S. ....					Instantly killed by an explosion of dynamite.
17	John T. Williams, ..	American,...	Timberman, ...	33	M. 1	1	2	Buttonwood, .....	Luzerne,....	Instantly killed by an explosion of dynamite.
17	Anthony Shutland, ...	German,.....	Timberman, ...	28	M. 1	1	2			Fatally injured by an explosion of dynamite. Died February 18, at City Hospital.
18	Thomas McDaniels, ..	American,...	Conductor, ....	21	M. 1	1		Nottingham, .....	Luzerne,....	Fatally injured while charging air motor. Died March 11, at City Hospital.
23	Andrew Schrader, ...	German,.....	Doorboy, .....	16	S. ....			Boston, .....	Luzerne,....	Fatally injured by fall of top rock. Died on way to hospital.
March 21	Stanley Dudeck, ....	Polish,.....	Miner, .....	40	M. 1	1	5	Nottingham, .....	Luzerne,....	Kicked in stomach by a mule. Died same night at his home.
May 14	Henry M. Hughes, ....	Welsh,.....	Timberman helper, .....	21	S. ....			Parrish, .....	Luzerne,....	Fatally injured by an explosion of gas. Died May 15.
14	Anthony Mutsgus, ...	Russian,.....	Miner, .....	32	M. 1	1	2	Parrish, .....	Luzerne,....	Fatally injured by an explosion of gas. Died May 24, at Mercy Hospital.
18	John P. Miller, .....	Swedish,....	Miner, .....	56	M. 1	1		Boston, .....	Luzerne,....	Fatally injured by being struck by a derrick car. Died May 25.
June 12	Stanley Sennick, .....	American,...	Slope headman, ...	29	S. ....			Woodward, .....	Luzerne,....	Instantly killed by being struck by a derrick car. Died June 12.
19	Albert Osmond, .....	Welsh,.....	Slope footman, ...	29	M. 1	1		Lance No. 11, .....	Luzerne,....	Fatally injured. Run over by loaded car. Died July 28, at Mercy Hospital.
19	John Hosko, .....	Polish,.....	Laborer, .....	21	M. 1	1		Avondale, .....	Luzerne,....	Fatally injured by an explosion of gas. Died June 21, at Mercy Hospital.
22	John McCoolley, .....	Polish,.....	Doortender, ....	55	S. ....			Woodward, .....	Luzerne,....	Fatally injured by flying coal from a derailed car. Died June 23, at Moses Taylor Hospital.
28	John Williams, .....	Welsh,.....	Plane footman, ...	64	M. 1	1		Buttonwood, .....	Luzerne,....	Instantly killed by a runaway trip.
29	Joseph Rhasavage, ...	Russian,.....	Miner, .....	37	M. 1	1	3	Parrish, .....	Luzerne,....	Fatally injured. Struck by an empty trip on slope. Died August 23.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
June 29	John Sweeney, .....	American...	Slater, .....	14	S.	.....	.....	Plymouth No. 3, ..	Luzerne,.....	Instantly killed by electricity while playing in breaker. Outside.
July 14	Stanley Lonsock, .....	Polish,.....	Laborer, .....	36	M.	1	4	Reynolds, .....	Luzerne,.....	Fatally injured by fall of top slate. Died at Mercy Hospital August 18.
20	Michael Veiminski, ..	Polish,.....	Laborer, .....	24	S.	.....	.....	Nottingham, .....	Luzerne,.....	Fatally injured by an explosion of gas. Died July 25 at City Hospital.
20	Henry Benny, .....	English,.....	Miner, .....	62	S.	.....	.....	Nottingham, .....	Luzerne,.....	Fatally injured by an explosion of gas. Died July 21 at City Hospital.
20	John Seipski, .....	Slavonian...	Laborer, .....	30	M.	1	2	Nottingham, .....	Luzerne,.....	Fatally injured by an explosion of gas. Died July 21 at Mercy Hospital.
Oct. 2	Martin Vilkel, .....	Polish,.....	Miner, .....	30	M.	1	.....	Farrish, .....	Luzerne,.....	Instantly killed by premature blast.
10	Andrew Bearish, ....	American...	Doorboy, .....	17	S.	.....	.....	Plymouth No. 2, ..	Luzerne,.....	Fatally injured. Squeezed between car and timber. Died October 10, at his home.
18	Ignas Cosofski, .....	Lithuanian..	Laborer, .....	33	M.	1	2	Nottingham, .....	Luzerne,.....	Fatally injured by an explosion of gas. Died October 28, at City Hospital.
19	John Galic, .....	Italian,.....	Laborer, .....	51	M.	1	.....	Woodward, .....	Luzerne,.....	Fatally injured by empty cars. Died at Moses Taylor Hospital, October 25.
25	John Shakinski, .....	Polish,.....	Laborer, .....	23	S.	.....	.....	Boston, .....	Luzerne,.....	Instantly killed by fall of coal from pillar.
Nov. 9	John Kengo, .....	Polish,.....	Laborer, .....	20	M.	1	.....	Reynolds, .....	Luzerne,.....	Instantly killed by fall of slate.
10	Anthony Johnski, ....	Lithuanian..	Laborer, .....	48	M.	1	3	Nottingham, .....	Luzerne,.....	Instantly killed by fall of slate.
17	William Boyce, .....	English,.....	Miner, .....	46	M.	1	3	Reynolds, .....	Luzerne,.....	Instantly killed by fall of coal from face of chamber.
19	Joseph Chersos, .....	Polish,.....	Laborer, .....	23	S.	.....	.....	Woodward, .....	Luzerne,.....	Instantly killed by fall of coal.
Dec. 6	Paul Schultz, .....	German,.....	Miner, .....	38	M.	1	3	.....	Luzerne,.....	Fatally injured by force from an explosion of gas. Died December 7.
6	John Promictor, .....	Russian,.....	Laborer, .....	25	M.	1	2	.....	Luzerne,.....	Suffocated by after-damp resulting from an explosion of gas.
5	Joseph Promictor, ....	Russian,.....	Laborer, .....	28	M.	1	.....	Buttonwood, .....	Luzerne,.....	Suffocated by after-damp resulting from an explosion of gas.
6	Jacob Knatorski, ....	Russian,.....	Miner, .....	37	M.	1	.....	.....	Luzerne,.....	Suffocated by after-damp resulting from an explosion of gas.
6	Jacol Korloski, .....	Polish,.....	Comp'y laborer, .....	28	S.	.....	.....	Woodward, .....	Luzerne,.....	Instantly killed by an explosion of gas.

Dec.	27	Joseph Brute, .....	Polish, .....	Laborer, .....	35	M.	1	1	Woodward, .....	Luzerne, .....	Instantly killed by fall of coal.
	23	David Jones, .....	Welsh, .....	Laborer, .....	29	S.	....	....	Lance No. 11, ....	Luzerne, .....	Fatally injured. Struck by a small piece of rock falling down shaft. Died in twenty minutes.
	28	Stanley Myshock, .....	Polish, .....	Slopeman, .....	41	M.	1	3	Avondale, .....	Luzerne, .....	Instantly killed by a runaway truck of timber.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	5 Andrew Geist, .....	Austrian, .....	Laborer, .....	26	S	Buttonwood, .....	Luzerne, .....	Left hip dislocated by fall of rock.
	12 Veto Kevcko, .....	Italian, .....	Laborer, .....	21	S	Woodward, .....	Luzerne, .....	Left hip fractured by a reel of copper wire striking him outside.
	12 Joseph Sworkofski, ..	Polish, .....	Laborer, .....	17	S	Plymouth No. 3, ..	Luzerne, .....	Leg fractured by fall of rock.
	16 Edward T. Jones, .....	Welsh, .....	Laborer, .....	36	M	Woodward, .....	Luzerne, .....	Compound fracture of leg by empty cars.
	18 Richard Edwards, .....	American, .....	Driver, .....	19	S	Lance No. 11, .....	Luzerne, .....	Arm fractured. Caught between cars.
Feb.	20 Anthony Wolznick, ....	Polish, .....	Laborer, .....	21	S	Nottingham, .....	Luzerne, .....	Burned on face, neck and hands by an explosion of gas.
	5 Jonathan Nelson, .....	English, .....	Miner, .....	35	M	Plymouth No. 2, ..	Luzerne, .....	Ribs fractured by fall of top rock.
	5 Joseph Ashofski, .....	Polish, .....	Laborer, .....	22	S	Nottingham, .....	Luzerne, .....	Body injured by fall of rock.
	13 Frank Burnat, .....	Polish, .....	Laborer, .....	25	M	Gaylord, .....	Luzerne, .....	Leg fractured. Struck by a wooden rail that slid down mainway.
	16 Joseph Bukoski, .....	Polish, .....	Miner, .....	24	M	Gaylord, .....	Luzerne, .....	Body bruised by flying coal from premature blast.
March	20 Valentine Oshelskie, ..	Russian, .....	Laborer, .....	21	S	Parrish, .....	Luzerne, .....	Face and back bruised by fall of rock.
	20 John Rugula, .....	Polish, .....	Laborer, .....	40	M	Woodward, .....	Luzerne, .....	Burned on face and hands by an explosion of gas.
	2 Joseph Stuscavitch, ..	Lithuanian, ..	Laborer, .....	22	S	Woodward, .....	Luzerne, .....	Leg fractured. Struck by a derailed car.
	10 Ignatz Jecouski, .....	Polish, .....	Laborer, .....	31	M	Lance No. 11, .....	Luzerne, .....	Thigh fractured by flying coal from a blast.
	20 Emil Sommerfeld, ....	German, .....	Miner, .....	36	M	Plymouth No. 2, ..	Luzerne, .....	Burned on face by a spark falling into a cartridge of powder.
May	28 Frank Richards, .....	American, .....	Driver, .....	19	S	Lance No. 11, ....	Luzerne, .....	Hip dislocated between car and door frame.
	4 Robert Blakesle, ....	American, .....	Timberman, .....	30	M	Parrish, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
	14 Walter Patton, .....	American, .....	Timberman helper, ..	26	M	Parrish, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
	16 William Fierlis, .....	Lithuanian, ..	Miner, .....	43	M	Lance No. 11, ..	Luzerne, .....	Burned on hands and face by an explosion of gas.
	18 Anthony Wallick, .....	Polish, .....	Miner, .....	40	M			Leg fractured. Struck by slope rope.
18 Martin Nevoski, .....	Polish, .....	Miner, .....	45	M				
June	18 Michael Getze, .....	Slavonian, ..	Miner, .....	41	M	Avondale, .....	Luzerne, .....	Leg fractured. Fell down pitching chamber.
	18 Thomas Kast, .....	Polish, .....	Miner, .....	49	M			
	5 Frank Cunningham, .....	Irish, .....	Rockman, .....	55	M	Plymouth No. 4, ..	Luzerne, .....	

June	12	James B. Williams, ..	American,...	Miner, .....	27	M. Buttonwood, .....	Luzerne, .....	Burned on face, neck and hands by an explosion of gas.
	13	Frederick Evans, .....	American,...	Slater, .....	15	S. Nottingham, .....	Luzerne, .....	Thigh fractured by falling from one floor to another. Outside.
	19	Michael Neary, .....	Irish, .....	Driver, .....	21	S. Avondale, .....	Luzerne, .....	Burned by an explosion of gas.
	20	Caradog Hyde, .....	American,...	Driver, .....	18	S. Plymouth No. 5, .....	Luzerne, .....	Right foot fractured sliding his foot upon the rail.
	25	Andrew Vcollis, .....	Polish, .....	Laborer, .....	31	S. Woodward, .....	Luzerne, .....	Ankle smashed. He deliberately walked in front of a blast.
July	1	Evan Davis, .....	American,...	Pulley man, .....	34	M. Buttonwood, .....	Luzerne, .....	Shoulder dislocated and ribs fractured by falling from platform.
	9	John Kelley, .....	Irish, .....	Assistant mason, .....	60	M. Plymouth No. 5, .....	Luzerne, .....	Collar bone fractured by cars.
	17	Anthony Sepcowski, ..	Polish, .....	Miner, .....	37	M. Lance No. 11, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
	18	William Welsh, .....	American,...	Runner, .....	33	M. Buttonwood, .....	Luzerne, .....	Leg fractured by a derailed car.
	20	Jno. Mutsoncavidge, ..	Lithuanian, ..	Laborer, .....	26	S. Lance No. 11, .....	Luzerne, .....	Hip dislocated by sitting down between cars.
	20	John Pitts, .....	Polish, .....	Laborer, .....	35	M. Nottingham, .....	Luzerne, .....	Burned on hands, face and neck by an explosion of gas.
	24	Amel Purkoski, .....	Russian, .....	Miner, .....	30	M. Plymouth No. 2, .....	Luzerne, .....	Leg fractured by fall of rock.
	24	Thos. Marchotits, .....	Polish, .....	Miner, .....	32	M. Nottingham, .....	Luzerne, .....	Burned by an explosion of gas.
	25	Evan Hopkins, .....	Welsh, .....	Miner, .....	12	M. Buttonwood, .....	Luzerne, .....	Shoulder broken by falling out of breaker
Aug.	1	Alexander Webeliski, ..	Polish, .....	Slater, .....	30	S. Buttonwood, .....	Luzerne, .....	Ribs fractured and cut on shoulder by cars catching legs of tripod.
	7	Tallie Reynolds, .....	American,...	Surveyor, .....	20	M. Nottingham, .....	Luzerne, .....	Pelvis fractured by cars.
	24	Charles Fay, .....	Polish, .....	Miner, .....	25	M. Woodward, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
Sept.	12	John Chebula, .....	Slavonian, ..	Miner, .....	34	M. Lance No. 11, .....	Luzerne, .....	Leg fractured by fall of rock while dislodging old door frame.
	13	Isiah Kershan, .....	English, .....	Bratticeman, .....	31	M. Plymouth No. 2, .....	Luzerne, .....	Body bruised by cars. Outside.
	14	Jno. Olevnick, .....	Russian, .....	Ashman, .....	25	S. Plymouth No. 2, .....	Luzerne, .....	Burned on hands and ears by an explosion of gas.
Oct.	15	Frank Martin, .....	Polish, .....	Tracklayer, .....	27	M. Buttonwood, .....	Luzerne, .....	Skull fractured and three fingers crushed.
	6	Andrew Rumski, .....	Russian, .....	Miner, .....	31	S. Boston, .....	Luzerne, .....	Thrown by a derailed loaded car.
	13	John E. Thomas, .....	American,...	Runner, .....	21	S. Nottingham, .....	Luzerne, .....	Hands and face burned by an explosion of gas.
	18	Lewis Metras, .....	Polish, .....	Miner, .....	42	M. Lance No. 11, .....	Luzerne, .....	Hands and face burned by an explosion of gas.
	22	George Bash, .....	Lithuanian, ..	Laborer, .....	22	S. Nottingham, .....	Luzerne, .....	Dislocation of hip and compound fracture of leg by fall of slate.
Nov.	15	John Onisko, .....	Russian, .....	Laborer, .....	35	M. Buttonwood, .....	Luzerne, .....	Body bruised. Thrown by the force from an explosion of gas.
Dec.	3	John Duffy, .....	Irish, .....	Runner, .....	29	S. Avondale, .....	Luzerne, .....	Body bruised. Thrown by the force from an explosion of gas.
	6	Charles Vitt, .....	German, .....	Miner, .....	34	M. Buttonwood, .....	Luzerne, .....	Body bruised. Thrown by the force from an explosion of gas.
	6	Andrew Schultz, .....	German, .....	Miner, .....	41	M. Buttonwood, .....	Luzerne, .....	Leg fractured and body bruised by force from an explosion of gas.
	6	John R. Jones, .....	Welsh, .....	Miner, .....	40	M. Buttonwood, .....	Luzerne, .....	Burned by an explosion of gas.
	6	George Braco, .....	American,...	Company laborer, .....	38	M. Woodward, .....	Luzerne, .....	Burned by an explosion of gas.
	6	Stephen Charles, .....	American,...	Company laborer, .....	39	M. Woodward, .....	Luzerne, .....	Foot fractured by a derailed loaded car.
	10	Hugh Campbell, .....	American,...	Driver, .....	16	S. Boston, .....	Luzerne, .....	Shoulder dislocated. Fell from box car to the ground. Outside.
	11	Julius Zippie, .....	Russian, .....	Loader, .....	40	M. Boston, .....	Luzerne, .....	



TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Dec. 14	Thomas J. Morgan, ..	Welsh, .....	Assistant foreman,	42	M.	Buttonwood, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
14	Thomas J. Davis, .....	Welsh, .....	Miner, .....	41	M.	Buttonwood, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
14	Anthony Peskoski, .....	Russian, .....	Laborer, .....	29	S.	Buttonwood, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
14	George Peskoski, .....	Austrian, .....	Laborer, .....	59	M.	Buttonwood, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
22	Frank Juba, .....	Polish, .....	Laborer, .....	20	S.	Parrish, .....	Luzerne, .....	Burned on hands and face by an explosion of gas.
28	Rowland Hughes, .....	Welsh, .....	Laborer, .....	45	S.	Woodward, .....	Luzerne, .....	Leg fractured by a derailed car.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

January 20, Dodson Colliery, Red Ash vein, John J. Hannigan, miner, was fatally injured while trimming down loose coal after a blast. A piece of the top tier fell upon his leg, and his leg had to be amputated at Mercy Hospital. He died from the result of his injuries January 25.

October 25, Boston Colliery, Red Ash vein, John Shakinski, laborer, was instantly killed. He was standing alongside of a car, near the face of chamber, when a piece of coal burst from the pillar and struck him.

November 17, Reynolds Colliery, Ross vein, William Boyce, miner, was instantly killed while barring out loose coal in the face of his chamber. He had just fired a blast, which did not properly work, and while engaged in working out the shot a piece of coal fell upon him.

November 19, Woodward, Ross vein, Joseph Chersos, laborer, was instantly killed. He was drilling a hole while the miner was preparing a charge of powder, when suddenly a fall of coal came upon him.

December 27, Woodward, Ross vein, Joseph Brute, laborer, was instantly killed. The miner was tamping a hole in the face of the airway with the other laborer. The victim was cleaning the road a distance of ten yards from the face of the working place, when suddenly there was a fall of top coal.

February 23, Boston Colliery, Andrew Schrader, door boy, was fatally injured in Top Split Red Ash vein. He went to the face of a miner's chamber three different times, each time having been ordered away by the miner. On his last visit he was engaged in boring a hole in a lump of coal when a fall of rock came upon him. He died on the way to the City Hospital.

July 14, Reynolds Colliery, Ross vein, Stanley Lonsock, laborer, was fatally injured. In company with his miner he endeavored to bar down top slate, but failed. Afterward, while working underneath this dangerous piece, it suddenly fell upon him. He died from the result of his injuries at Mercy Hospital, Wilkes-Barre, August 15.

November 9, Reynolds Colliery, Ross vein, John Kengo, laborer, was instantly killed while working in a section of the mine where pillars were being robbed. He was engaged in loading a car when a piece of top slate fell upon him.

November 10, Nottingham, Ross vein, Anthony Johnski, laborer, was instantly killed. He was standing about six yards from the face of the chamber, waiting for an empty car, when a piece of top slate fell upon him.

## By Cars

May 18, Boston Colliery, bottom split of Red Ash vein, John P. Miller, miner, was fatally injured while riding on the bumper of an empty car. The car suddenly became derailed and he was thrown across the door-rod, causing a rupture. He died from the result of his injuries May 25.

June 12, Woodward, No. 1 Slope, Red Ash vein, Stanley Sennick, inside slopeman, was instantly killed. He was running ahead of an empty trip down the slope, and seeing that he could not keep in advance of it, he turned to one side, directly behind a prop. The trip became derailed and knocked out the prop, which struck him.

June 19, Lance, No. 3 Slope, Red Ash vein, Albert Osmond, footman, was fatally injured. He was in the act of hooking a rope on a loaded trip when another loaded trip bumped into the one that he was hooking the rope to, derailing the front car, which ran upon him. He died from the result of his injuries July 28 at the City Hospital.

June 22, Woodward, No. 3 Slope, Baltimore vein, John McCooley, door-tender, was fatally injured. He opened his door and stood against the pillar, when a runaway car from the gangway became derailed within a few feet from where he was standing. He was struck by falling coal and injured so badly that he died June 23 at Moses Taylor Hospital.

June 28, Buttonwood, Hillman vein, John Williams, footman, was instantly killed. Two loaded cars were being run to the head of the plane. It is claimed they jumped the safety blocks and went down the plane without the rope, striking the victim and killing him instantly.

June 29, Parrish, No. 3 Slope, No. 2 West Bennett vein, Joseph Rhasavage, miner, was fatally injured by being struck by an empty trip of cars. He was walking on the Slope, instead of the manway. He died August 24 at his home.

October 10, Plymouth No. 2, Andrew Bearish, door-boy, was fatally injured in attempting to jump on the head end of a loaded car. He was suddenly squeezed between car and set of timber. He died October 10 at his home.

October 19, Woodward, No. 1 Slope, Red Ash vein, John Galic, laborer, was fatally injured. He was endeavoring to cross the track in front of a Slope trip, when an empty car ran upon him. He died at Moses Taylor Hospital October 25.

December 28, Avondale, Red Ash vein, No. 2 Slope, Stanley Myshock, slopeman, was instantly killed. He was walking down the slope when a runaway truck, loaded with timber, struck him. The slopeman had blocked the truck on the slope, and in making an effort to have three empty cars coupled to it, the trip bumped it so hard that the blocking gave way, which permitted a truck of timber and three empty cars to run down the slope, with the above result.

### By Explosions of Gas

May 14, Parrish, Bennett vein, Henry M. Hughes, timberman helper, and Anthony Mutsgus, miner, were fatally injured by an explosion of gas. Immediately upon resumption of work after suspension there was a fall on the gangway, and the fire-boss instructed Mutsgus that there would be no work in that section of the mine on account of the fall and ordered him not to go into his chamber. Mutsgus, who had a box of dynamite, did not heed this order and went into the gangway over the fall, and deposited the dynamite in his box. Instead of coming out the same way as he entered, he went up to an old abandoned chamber and walked through several chambers in an effort to find one that was tapped by No. 1 Counter, and

while so doing he encountered a body of gas, burning him severely. He died May 24 at Mercy Hospital. The other victim, Henry M. Hughes, was engaged in assisting two others in setting timber on No. 1 Counter. The force of the explosion blew down the walls between Breasts and Counter, which brought him directly in contact with the force of the explosion. This portion of the mine, according to the fire-boss's report on this morning had been found free of gas. Orders had been strictly given by the Superintendent and the Inside Foreman that all places, those working as well as those abandoned, should be examined. The fire boss and the assistant foreman, who made a tour of this section, say in their report that all places, where the explosion occurred, were free from any standing gas. At inquest held on the body of Henry M. Hughes, after due deliberation, the following verdict was rendered:

"That the said Henry M. Hughes came to his death on the 15th day of May A. D. 1906, at Plymouth, Pa., from injuries received by an explosion of gas at Parrish Mines, at Plymouth, Pa., May 14, 1906. The explosion was due to the negligence of the Assistant Mine Foreman and Fire Boss, who did not make a proper examination of the workings on the morning of the explosion. They also made a false report as to the condition of the mines on this particular morning, which both signed. We also find from the evidence that Anthony Mutsgus was extremely negligent in going into parts of the mine that he had been forbidden to go into.

D. W. DODSON,

Coroner.

WILLIAM R. WOOD,  
THOMAS C. PRICE,  
HENRY C. WOLFE,  
FRANK KETTLE,  
PHILIP WALTERS.

Jurors."

June 19, Avondale, Red Ash vein, John Hosko, laborer, was fatally injured. A cut-off-door had been left open by some person, which permitted gas to accumulate in the face of gangway. Shortly after the door was closed, the air resumed its usual course and brought a small body of gas in contact with the victim's naked light. He was burned so badly that he died June 21, at Moses Taylor Hospital.

July 20, Nottingham, No. 10 West, Red Ash vein, Michael Veinski, laborer, Henry Benny, miner, and John Scipski, laborer, were fatally burned by an explosion of gas. Breast No. 20, 10 West, Red Ash Gangway, was reported clear of gas in the morning by the fire boss, and when the men arrived at their places of work the gas had accumulated in the breast, and in some unknown manner was ignited, thereby causing an explosion. Immediately after investigation of the accident, I ordered an inquest to be held to inquire further in what way the gas had accumulated after the fire boss had made his morning rounds, as he declared that he found the place absolutely free from any standing gas. The jury rendered the following verdict:

"That one Henry Benny came to his death on the 20th day of July, A. D. 1906, at the Nottingham Colliery, at Plymouth, from injuries received from an explosion of gas at the time and place mentioned



above. We find from the evidence that the fire boss who was on duty this morning, in this section of the mine, was negligent in his duty in not examining the places under his care before he made his report that they were all right. We also find that the two miners, whose laborers were burned by gas, disobeyed the Mine Laws of this Commonwealth in permitting their laborers to precede them (the miners) into the Breast where they were working.

D. W. DODSON,  
Coroner.  
HENRY WOLFE,  
FRANK KETTLE,  
THOMAS EDWARDS,  
WILLIAM R. WOOD,  
PHILIP WALTERS,  
JOHN M. THOMAS,  
Jurors."

October 18, Nottingham, 9 West, Red Ash vein, Ignas Cosofski, laborer, was fatally burned. He was engaged at the time of the accident in loading a car, when he ignited a small quantity of gas which burned him upon the face, hands and shoulders. He died October 28 in the City Hospital.

December 6, Buttonwood, Kidney vein, Paul Schultz, miner, was fatally injured. He was engaged with others in replacing timber which had been dislodged by a car that had become derailed, when an explosion of gas occurred in the gangway, the force of which threw him so violently that he was fatally injured. He died December 7.

December 6, Woodward, No. 1 Slope, Baltimore vein, Jacob Korlowski, company laborer, was instantly killed. He entered an abandoned portion of the mine against orders and ignited a body of gas. It is stated by others, who were close by, that he entered the place for the purpose of trying to find a shovel. It was customary for him to bring the tools that were needed from the foot of the shaft, but this night he left his tools at the foot of the shaft and made an effort to find some in close proximity to his work.

### Suffocation by Gas

December 6, Buttonwood, Kidney vein, John Promictor, laborer, Joseph Promictor, laborer, and Jacob Knatofski, miner, were suffocated by after damp due to explosion of gas. The accident occurred in Kidney Seam, about 11:25 A. M., caused by an explosion of gas. A loaded car was run down from Paul Schultz' gangway and became derailed, dislodging some timber at the foot of the run. The Foreman immediately sent for all hands who were engaged in the airway and gangway to proceed to the foot of the run to clean up the fall and place the timber in proper position. At 11:20 the Foreman left to go to dinner. At the time of his leaving, they were all engaged in working at the foot of the run and were using safety lamps. He had just gone out the gangway, approximately one hundred yards, when the explosion took place. On account of the nature of the ground, which was faulty, generating considerable gas, all work was done by safety lamps, and for blasting, dynamite was used absolutely, thereby preventing any feeders from catching fire, which



would instantly communicate with the coal and the timber. I ordered an inquest to be held to further inquire into the manner in which these men came to their death. The following is the verdict:

"It so appears that one John Promictor, from evidence adduced and view of the body, came to his death on the 6th day of December, A. D. 1906, at Buttonwood Mine, Parrish Coal Company, from injuries received from an explosion of gas in the above mentioned mine; and Jacob Knatofski, Joseph Promictor and Paul Schultz, all lost their lives from the same cause, and at the same time and place. From the evidence adduced at the hearing, it is our opinion that some one of the miners or laborers who lost their lives opened a safety lamp, and by so doing ignited a feeder and the explosion followed. The men were permitted to use unlocked lamps, which is permissable by law, provided the Mine Foreman approves of it, and in this case he did. We recommend, however, that in places of a gaseous nature, such as this proved to be, that in order to protect the lives of such men as do not fully understand the danger they are subjected to by opening their lamps, that locked safety lamps be used.

D. W. DODSON,  
Coroner.  
MARTIN DAWSON,  
D. J. SMITH,  
SAMUEL SMITH,  
FRED MAYCOCK,  
FRANK CASTERLINE,  
FRED V. VINCENS,  
Jurors."

### Explosion of Dynamite

February 17, Buttonwood, Hillman vein, Owen O. Anthony, timberman, Joseph Mentz, timberman, and John T. Williams, were instantly killed, and Anthony Shutland, timberman, was fatally injured, dying from the result of his injuries February 18 at the City Hospital.

The above named persons, so far as could be learned, were on the night shift, and immediately after the regular work proceeded to the timbermen shanty to sharpen their tools, and while so engaged an explosion of dynamite occurred in the shanty. Upon investigation of the accident, I learned from the other timbermen that it was customary to keep from three to five sticks of dynamite on hand for the purpose of blasting out timber and breaking rock. The shanty was composed of two compartments; the front part heated by steam. In this part of the shanty the exploders were kept in a box. In the inner room the few sticks of dynamite were kept in a small box, which rested on the ground. No one could say what caused the dynamite to explode.

### Blasts

October 2, Parrish, No. 6 Slope, No. 2 West Cooper vein, Martin Vilkel, miner, was instantly killed. He was in the act of firing a blast. He lighted the match and was running to a place of safety when the shot suddenly exploded, with the above result,

## Mules

March 21, Nottingham, No. 8 East Red Ash vein, Stanley Dudeck, miner was fatally injured. The driver was pulling a car out of the victim's chamber. The mule balked and would not pull the car. Dudeck came forward and struck the mule on the hips with a piece of iron. The mule kicked him. Dudeck came forward again and struck the mule a second time with the iron. The mule kicked him again, this time in the stomach. He died the same evening at his home from the result of his injuries.

## Miscellaneous, Inside

February 18, Nottingham, 11 West, Red Ash vein, Thomas McDaniels, inside conductor, was fatally injured. He was helping to charge the air locomotive when the coupling on the charging station came loose, permitting the escaping air to strike him. He died from the result of his injuries in the City Hospital, March 11.

December 28, Lance, Bennett vein, David Jones, laborer, was fatally injured. He was at the foot of the shaft, entering the cage to come to the surface, when a small piece of rock fell down the shaft and struck him on the head and crushed his skull at the base of the brain. He died a few minutes afterward.

## Miscellaneous, Outside

June 29, Plymouth, No. 3, John Sweeney, slate picker, was electrocuted. He was playing about the breaker before starting time, and got hold of a steam pipe that was charged with electricity. It is supposed that the electric wire came in contact with the feed wire of the Traction Company, caused by the storm the night previous.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

### DELAWARE AND HUDSON COMPANY

#### Plymouth No. 2

No. 11 Plane driven through rock from Stanton to Hillman vein 230 feet.

No. 10 plane extended 300 feet and finished.

No. 7 Slope, Bottom, Red Ash vein, extended 170 feet.

No. 6 Slope, Stanton vein, extended 475 feet.

Condition of colliery is good.

#### Plymouth No. 3

No. 8 Plane, Lance vein, driven 300 feet.

New steel tower erected over main hoisting shaft to take place of frame structure.

Condition of colliery is good.

#### Plymouth No. 4

No. 8 Plane, Top Split, Red Ash vein, extended 250 feet.

Condition of colliery is good.

#### Plymouth No. 5

No. 6 Slush hole continued from Bennett to Bottom Red Ash vein, a distance of 225 feet.

New steel tower erected over main shaft to take place of frame structure.

Condition of colliery is good.

## Boston

No. 9 Plane, Top Split, Red Ash vein, extended 600 feet.

No. 13 Plane, Bottom Split, Red Ash vein, graded and driven 1000 feet, 600 feet of which was driven through fault cutting the Top and Bottom Splits of the Red Ash vein.

8 inch rope hole for No. 13 Plane drilled 225 feet and pair of 14x20 engines installed.

Air return in rock driven from Ross vein to Top Split of Red Ash.

Steel tower erected to take the place of frame structure over main shaft.

Condition of colliery is good.

## LEHIGH AND WILKES-BARRE COAL COMPANY

## Lance No. 11

Outside.—Fuel conveyor.

Inside.—Compound condensing pump and rooms.

Condition of colliery is good.

## Nottingham No. 15

Outside.—Colliery office.

Inside.—Duplex pump, 9th East.

Condition of colliery is good.

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

## Avondale

The appearance outside at this colliery has been considerably improved by the erection of a concrete retaining wall extending along the hillside from the breaker to the fan house.

The installation of feed water regulators, etc., in boiler room is a decided improvement over the old method of feeding the boilers.

Inside.—Two 7x12 short rock tunnels were driven on No. 4 East Gangway Ross vein, through fault.

The installation of a double motor electric hoist on No. 7 Slope, Ross vein, is a decided improvement over the old steam engine.

The erection of concrete piers, or props, in several places in this colliery might be worthy of mention.

Condition of colliery is good.

## Woodward

Outside.—New steam lines from the boiler plant to ventilating fan, hoisting engines and power station have made a decided improvement in the outside appearance and efficiency of this colliery.

The breaker has been improved by the installation of mechanical pickers, rock crushers, etc., together with two Phillips steam dumps.

The brick partition separating hoist way and air way No. 2 Shaft was partly completed during the year; it is now completed. It has been a source of improvement to the ventilation of this colliery.

The erection of a steel bridge under this breaker over railroad tracks adds strength to the building and will prevent the building from getting on fire from sparks from locomotives passing under it.

Inside.—Two rock tunnels were driven connecting Cooper vein with 5 Foot vein and Red Ash with Ross vein.

A rock slope is being sunk from the surface to the Abbott vein. This work will be completed in 1907.

The erection of a concrete and iron air bridge, No. 2 Slope, Red Ash vein, has made a decided improvement in the ventilation of this section.

This Company is making an effort to prevent mine fires by erecting concrete and brick walls with iron I-Beams, thus eliminating the use of timber.

Condition of colliery is good.

#### PARRISH COAL COMPANY

##### Parrish

No. 6 Slope extended 400 feet. Baltimore vein graded this slope to top of an anticlinal, 426 feet, deepest cut 10 feet.

No. 7 Slope extended 252 feet, to synclinal Baltimore vein.

No. 8 Slope extended 1300 feet to Boundary Five Foot vein.

Pair of engines for above 12x14 inches.

A tunnel from No. 2 West Baltimore vein to Cooper vein 99 feet.

A tunnel from No. 6 Slope, 3 West Baltimore to Cooper vein 80 feet.

A rope haulage from No. 3 Slope, Baltimore vein, to Five Foot vein, a distance of 5754 feet.

Pair of engines for above 16x24 inches.

No. 9 Slope sunk along Southern Boundary in Five foot vein for a distance of 450 feet.

Pair of engines for above 10x14 inches.

Condition of colliery is good.

##### No. 2 Colliery, Buttonwood

No. 1 Plane, Abbott vein, extended 249 feet.

Installed a Knowles duplex pump, 18½x18 inches, in Abbott vein.

No. 3 Slope, Kidney vein, sunk a distance of 99 feet in rock and 129 feet in coal.

No. 5 Slope, Hillman vein, sunk 480 feet.

Pair of engines for same 12x14 inches.

No. 4 Slope Stanton vein sunk 700 feet.

Rock Plane for return from the Stanton to Hillman vein, 7 feet by 12 feet on 30 degree pitch, a distance of 117 feet.

No. 1 Tunnel, East Level, Stanton vein, reopened for a distance of 1800 feet.

Installed a rope haulage at foot of shaft to the foot of No. 4 Plane, Hillman vein, 600 feet, to foot of No. 2 Plane, Stanton vein, 1002 feet.

Pair of engines 14 inches by 20 inches for above.

Condition of colliery is good.

#### KINGSTON COAL COMPANY

##### Gaylord

Driving a traveling way for men and mules from surface to Cooper vein. When this is completed the shaft will be abandoned and all mule stables inside.

A tunnel has been driven from the Bennett to the Checker vein about 3 feet 8 inches in thickness.

Installed a conveyor line and Williams crusher for the purpose of breaking down all refuse from breaker and washing it into the mines.

Installed a pump for the purpose of pumping water to the top of culm plane, where bore holes have been put down, through which to wash culm into the mines.

Condition of colliery is fair.



# Tenth District

LUZERNE COUNTY

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Wilkes-Barre, Pa., February 20, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Tenth Anthracite District for the year ending December 31, 1906.

The report contains the statistical information required by law, with a brief description of the fatal accidents and the condition of the mines.

Respectfully submitted,

JOSEPH J. WALSH,  
Inspector.



## SUMMARY OF STATISTICS

Number of collieries, .....	12
Number of mines, .....	39
Number of mines in operation, .....	39
Number of tons of coal shipped to market, .....	3,204,811
Number of tons used at mines for steam and heat .....	364,618
Number of tons sold to local trade and used by employes, .....	44,556
Number of tons produced, .....	3,613,985
Number of persons employed inside of mines, .....	6,468
Number of persons employed outside .....	2,529
Number of fatal accidents inside of mines, .....	32
Number of fatal accidents outside, .....	6
Number of non-fatal accidents inside of mines, .....	58
Number of non-fatal accidents outside, .....	16
Number of tons of coal produced per fatal accident inside, .....	112,937
Number of persons employed per fatal accident inside, ..	202
Number of persons employed per fatal accident outside, ..	421
Number of persons employed per non-fatal accident inside, ..	112
Number of persons employed per non-fatal accident outside, .....	158
Number of wives made widows, .....	24
Number of children orphaned, .....	50
Number of steam locomotives used inside of mines, .....	2
Number of steam locomotives used outside, .....	22
Number of compressed air locomotives used inside, .....	5
Number of electric motors used inside, .....	14
Number of electric motors used outside, .....	3
Number of fans in use, .....	39
Number of gaseous mines in operation, .....	27
Number of non-gaseous mines in operation, .....	12
Number of new mines opened, .....	2

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Susquehanna Coal Company, .....	1,292,379
Delaware, Lackawanna and Western Railroad Company, .....	856,190
Lehigh and Wilkes-Barre Coal Company, .....	596,571
West End Coal Company, .....	466,751
Alden Coal Company, .....	267,739
Lehigh Valley Coal Company, .....	67,869
Pittston Coal Mining Company, .....	66,486
Total, .....	<u>3,613,985</u>

## Production by Counties

Luzerne, .....	<u>3,613,985</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Susquehanna Coal Co., .....	19	6	25	39	8	88	68,020	43,079	2,306	1,119	3,425	121	186	77	140
Delaware, Lackawanna and Western Railroad Co., .....	1	.....	1	10	4	14	856,190	85,619	1,545	543	2,088	1,545	.....	155	186
Lehigh and Wilkes-Barre Coal Co., .....	4	.....	4	8	1	9	119,314	74,571	1,008	253	1,261	202	.....	126	253
West End Coal Co., .....	4	.....	4	4	2	6	116,688	116,688	811	272	1,083	203	.....	203	126
Aldon Coal Co., .....	2	.....	2	3	1	4	89,246	89,246	485	186	673	242	.....	162	188
Lehigh Valley Coal Co., .....	1	.....	1	2	.....	2	133,819	33,955	182	83	265	182	.....	91	.....
Pittston Coal Mining Co., .....	.....	.....	.....	1	.....	1	67,869	66,486	131	71	202	.....	.....	131	.....
Totals and averages for district, .....	92	6	38	58	16	74	112,337	62,310	6,408	2,529	8,997	202	421	112	168

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
<b>Causes of Accidents Inside</b>													
Falls of coal, .....		2	1				3	1	1	1	1		2
Falls of roof, .....													10
Mine cars, .....			2								2		4
Explosions of gas and dust, .....	1							9		1		1	12
Premature blasts, .....		1								1			3
Electricity, .....							1						1
<b>Totals, .....</b>	<b>1</b>	<b>3</b>	<b>3</b>			<b>2</b>	<b>4</b>	<b>11</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>32</b>
<b>Causes of Accidents Outside</b>													
Cars, .....	1										1	1	3
Machinery, .....			1								1		2
Miscellaneous, .....				1									1
<b>Totals, .....</b>	<b>1</b>		<b>1</b>		<b>1</b>						<b>2</b>	<b>1</b>	<b>6</b>
<b>Grand totals inside and outside, .....</b>	<b>2</b>	<b>3</b>	<b>4</b>		<b>1</b>	<b>2</b>	<b>4</b>	<b>11</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>38</b>

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
<b>Causes of Accidents Inside</b>													
Falls of coal, .....	2	1	1			1			1	2			8
Falls of slate, .....			1		1	1							3
Falls of roof, .....	1	1			2	1	3			1	1	1	11
Mine cars, .....	2		3				4		2			1	15
Explosions of gas and dust, .....		1				1		2					4
Premature blasts, .....						1	1		1	2			5
Falling into slopes, etc., .....						2							2
Crushed at batteries, .....		1											1
By mules, .....			1		1								3
Miscellaneous, .....		1					1	2	1		1		6
<b>Totals, .....</b>	<b>5</b>	<b>5</b>	<b>6</b>		<b>4</b>	<b>8</b>	<b>9</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>58</b>
<b>Causes of Accidents Outside</b>													
Cars, .....	1	1				2		1	1		1		7
Machinery, .....		2	2				1						5
Miscellaneous, .....						1	1					2	4
<b>Totals, .....</b>	<b>1</b>	<b>3</b>	<b>2</b>			<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>		<b>1</b>	<b>2</b>	<b>16</b>
<b>Grand totals inside and outside, .....</b>	<b>6</b>	<b>8</b>	<b>8</b>		<b>4</b>	<b>11</b>	<b>11</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>3</b>	<b>4</b>	<b>74</b>

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	1	2	1	.....	.....	1	2	6	.....	3	1	.....	17
Miners' laborers, .....	.....	1	1	.....	.....	1	1	3	.....	.....	.....	1	3
Drivers and runners, .....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1	.....	2
Pumpmen, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Company men, .....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	3
All other employes, .....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	2
Totals, .....	1	2	3	.....	.....	2	4	11	1	3	3	1	32
Outside													
Slatepickers (boys), .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
All other employes, .....	1	.....	1	.....	1	.....	.....	.....	.....	.....	1	1	5
Totals, .....	1	.....	1	.....	1	.....	.....	.....	.....	.....	2	1	6
Grand totals inside and outside, ....	2	3	4	.....	1	2	4	11	1	3	5	2	38

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants, .....								1					1
Miners, .....	2	2	1		1	6	3		3	2	1	1	22
Miners' laborers, .....	1	3	2		2	3	1	1		3			15
Drivers and runners, .....				1			1	1		1	1	1	8
Doorboys and helpers, .....	1		1		1			2	1				5
Company men, .....							4		1	1			6
All other employes, .....	1												1
Totals, .....	5	5	2		4	8	9	5	5	7	2	2	58
Outside													
Blacksmiths and carpenters, .....						1	1		1			1	4
Slatepickers (boys), .....		2	1									1	4
All other employes, .....	1	1	1			2	1	1			1		8
Totals, .....	1	3	2			3	2	1	1		1	2	16
Grand totals inside and outside, ....	6	8	8		4	11	11	6	6	7	3	4	74



TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1				1		1	2	1		2		8
Welsh, .....							1	1		1			3
Irish, .....			1										1
German, .....													1
Polish, .....	1	2				1	1	7		2	2	2	13
Italian, .....			1										1
Slavonian, .....						1							2
Lithuanian, .....											1		1
Austrian, .....		1	1										2
Russian, .....			1										1
Totals, .....	2	3	4		1	2	4	11	1	3	5	2	38

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	1	2			1	2	2	1	1	1	1	14
English, .....					1	1	2	1	2	1			4
Welsh, .....						1	1	1					5
Irish, .....					1	1	1						3
German, .....			1				1					1	3
Polish, .....	2	5	3		1	4	3	3	3	4	1	2	31
Hungarian, .....										1			1
Italian, .....						1					1		2
Slavonian, .....			2			1	1						4
Lithuanian, .....	2	1				1							3
Austrian, .....		1											1
Russian, .....					1	1	2						4
Totals, .....	6	8	8		4	11	11	6	6	7	3	4	74

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed in-side	Average number of cubic feet per minute provided for each person
<b>Susquehanna Coal Co.</b>																
<b>Colliery Number 5:</b>																
Number 2, .....	Shaft, .....	Gaseous, .....	Fan, .....	35	8	8	60	1.6	Guibal, .....	Steam, .....	6	110,400	80,000	114,580	296	270
Number 2, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	6	6	65	1.5	Guibal, .....	Steam, .....	2	56,000	38,000	114,580	123	309
Number 4, .....	Shaft, .....	Gaseous, .....	Fan, .....	20	6	6	60	1.1	Guibal, .....	Steam, .....	2	56,000	38,000	114,580	93	481
Number 5, .....	Slope, .....	Gaseous, .....	Fan, .....	16	4	3	30	1.2	Sturdevant, .....	Steam, .....	4	64,000	45,000	72,000	53	481
Number 4, .....	Slope, .....	Gaseous, .....	{ 3 fans, .....	25	8	8	75	1	Guibal, .....	Steam, .....	8	173,900	118,560	178,000	172	689
Number 4, .....	Slope, .....	Gaseous, .....	{ 3 fans, .....	25	8	8	100	2.8	Guibal, .....	Steam, .....	8	173,900	118,560	178,000	172	689
Number 4, .....	Slope, .....	Gaseous, .....	{ 3 fans, .....	25	8	8	88	2	Guibal, .....	Steam, .....	8	173,900	118,560	178,000	172	689
Number 4, .....	Slope, .....	Gaseous, .....	Natural, .....	20	6	6	88	2	Guibal, .....	Steam, .....	8	173,900	118,560	178,000	172	689
Number 4, .....	Tunnel, .....	Non-gas, .....	Natural, .....	20	6	6	88	2	Guibal, .....	Steam, .....	8	173,900	118,560	178,000	172	689
Number 4, .....	Tunnel, .....	Non-gas, .....	Natural, .....	20	6	6	88	2	Guibal, .....	Steam, .....	8	173,900	118,560	178,000	172	689
Number 4, .....	Drift, .....	Non-gas, .....	Natural, .....	20	6	6	88	2	Guibal, .....	Steam, .....	8	173,900	118,560	178,000	172	689
<b>Colliery Number 6:</b>																
Number 6, .....	Tunnel, .....	Gaseous, .....	{ 3 fans, .....	25	8	8	54	1.9	Guibal, .....	Steam, .....	5	58,430	43,080	59,570	221	195
Number 6, .....	Slope, .....	Gaseous, .....	{ 3 fans, .....	20	6	6	53	1			6	99,131	96,770	100,000	284	341
Number 6, North, .....	Shaft, .....	Gaseous, .....	{ 3 fans, .....	25	8	8	54	1.9			4	22,673	19,417	24,905	57	341
Number 7, .....	Shaft, .....	Gaseous, .....	{ 3 fans, .....	25	8	6	60	2	Guibal, .....	Steam, .....	4	80,000	77,000	82,000	188	414
<b>Colliery Number 7:</b>																
Number 1, South, .....	Shaft, .....	Gaseous, .....	Fan, .....	25	8	8	60	1.6	Guibal, .....	Steam, .....	9	141,180	88,680	147,070	340	261
Number 1, North, .....	Shaft, .....	Gaseous, .....	Fans, .....	{ 20	6	6	72	1.5	Guibal, .....	Steam, .....	11	216,155	174,750	257,700	420	416



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Susquehanna Coal Co. Colliery No. 3, ..... Colliery No. 5, ..... Colliery No. 7, .....	Luzerne,.....	Robert A. Quin, ..	Wilkes-Barre, .....	Francis H. Kholbraker, ..	Nanticoke, .....	Pennsylvania
Delaware, Lackawanna and Western Railroad Co. Auchincloss, ..... Bliss, ..... Truesdale, .....	Luzerne,.....	R. A. Phillips, ....	Scranton, .....	H. G. Davis, .....	Kingston, .....	D., L. and W.
Lehigh and Wilkes-Barre Coal Co. Wanamie No. 18, ..... Sugar Notch No. 9, .....	Luzerne,.....	C. F. Huber, .....	Wilkes-Barre, .....	{ W. H. Herring, Out- side Supt. Morgan R. Morgans, In- side Supt. Douglas Bunting, Chief Engineer.	Wilkes-Barre, ..	C. R. R. of N. J.
West End Coal Co. West End, .....	Luzerne,.....	H. H. Brady, Jr., ..	Scranton, .....	H. A. Fillmore, .....	Shickshinny, ..	Penna. and C. R. R. of N. J.
Alden Coal Co. Alden, .....	Luzerne,.....	K. M. Smith, .....	Alden Station, ....	James G. Turner, .....	Alden Station, ..	C. R. R. of N. J.
Lehigh Valley Coal Co. Warrior Run, .....	Luzerne,.....	S. D. Warriner, ..	Wilkes-Barre, .....	F. E. Zerbey, .....	Wilkes-Barre, ..	Lehigh Valley
Pittston Coal Mining Co. Hadleigh, .....	Luzerne,.....	Jno. J. O'Boyle, ...	Sugar Notch, .....	Charles H. Walker, .....	Plains, .....	C. R. R. of N. J.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Susquehanna Coal Co.												
Colliery No. 5, .....	{ Luzerne,..... }	320,624	76,350	14,156	411,140	224	1,204	8	14	12,683	17,135	141
Colliery No. 6, .....		438,337	43,865	3,508	486,730	233	1,080	5	8	16,353	4,014	105
Colliery No. 7, .....		336,576	57,013	320	394,509	222	1,141	12	16	6,806	96,675	161
Totals, .....		1,095,567	178,228	17,984	1,292,379	.....	3,425	25	38	35,842	117,824	407
Delaware, Lackawanna and Western Railroad Co.												
Auchincloss, .....	{ Luzerne,..... }	151,456	17,155	7,309	175,980	211	583	1	1	3,158	7,710	27
Bliss, .....		379,311	23,000	2,460	406,771	242	885	.....	6	19,190	8,988	47
Truesdale, .....		239,131	13,505	.....	273,439	231	615	.....	7	8,116	9,425	21
Totals, .....		790,791	53,660	9,829	856,190	.....	2,068	1	11	23,464	26,123	95
Lehigh and Wilkes-Barre Coal Co.												
Wanamie No. 18, .....	{ Luzerne,..... }	415,243	41,182	2,076	458,501	204	858	3	7	11,682	19,366	124
Sugar Notch No. 9, .....		153,781	12,289	.....	138,070	151	433	2	2	4,327	9,045	26
Totals, .....		541,024	53,471	2,076	596,571	.....	1,291	5	9	16,009	28,411	150
West End Coal Co.												
West End, .....	{ Luzerne,..... }	402,585	34,685	7,545	444,815	218	1,671	4	6	12,318	102,519	82
West End washery, .....		21,936	.....	.....	21,936	72	12	.....	.....	.....	.....	.....
Totals, .....		424,521	34,685	7,545	466,751	.....	1,683	4	6	12,318	102,519	82



TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Alden, Alden Coal Co.	Luzerne	240,077	22,000	5,662	267,739	193	673	2	4	7,918	15,875	80
Warrior Run, Lehigh Valley Coal Co.	Luzerne	51,992	14,374	903	67,869	90	265	1	2	1,607	584	27
Hadleigh, Pittston Coal Mining Co.	Luzerne	60,929	5,000	557	66,486	95	202	.....	1	1,725	3,300	18
Grand totals, .....		3,204,811	364,618	44,556	3,613,985	.....	3,997	38	74	98,883	294,586	859

TABLE 2.—Recapitulation

Susquehanna Coal Co., .....	Delaware	1,095,567	178,828	17,984	1,292,379	.....	3,435	25	38	35,842	117,894	407
Delaware, Lackawanna and Western Railroad Co., .....	Delaware	790,701	55,660	9,829	856,190	.....	2,088	1	14	23,464	28,123	95
Lehigh and Wilkes-Barre Coal Co., .....	Luzerne	541,624	53,471	2,076	596,571	.....	1,261	5	9	16,009	28,411	150
West End Coal Co., .....	Luzerne	424,521	34,085	7,545	466,751	.....	1,083	4	6	12,318	102,519	83
Alden Coal Co., .....	Luzerne	240,077	22,000	5,662	267,739	.....	673	2	4	7,918	15,875	80
Lehigh Valley Coal Co., .....	Luzerne	51,992	14,374	903	67,869	.....	265	1	2	1,607	584	27
Pittston Coal Mining Co., .....	Luzerne	60,929	5,000	557	66,486	.....	202	.....	1	1,725	3,300	18
Totals, .....		3,204,811	364,618	44,556	3,613,985	.....	3,997	38	74	98,883	294,586	859

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Susquehanna Coal Co., .....	Luzerne.	33	1,155	45	11,764	12,919	13	5	.....	72	12,670	13	9,450	4,900	11
Delaware, Lackawanna and Western Railroad Co., .....		.....	.....	21	2,534	2,534	1	.....	14	54	7,198	9	5,430	3,915	3
Lehigh and Wilkes-Barre Coal Co., .....		10	365	12	2,750	3,115	3	.....	64	64	1,832	6	6,022	3,088	2
West End Coal Co., .....		.....	.....	10	1,950	1,950	6	.....	35	35	1,355	5	865	3,550	2
Albion Coal Co., .....		.....	.....	8	1,535	1,535	1	.....	9	9	1,375	2	1,800	1,000	2
Lehigh Valley Coal Co., .....		10	1,500	10	1,500	1,500	.....	.....	10	10	1,250	1	1,500	1,000	1
Pittston Coal Mining Co., .....		.....	.....	5	550	550	.....	.....	9	9	500	1	400	800	.....
Totals, .....		43	1,520	111	22,583	24,103	24	5	17	253	26,110	37	25,467	14,453	18

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Col- lieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Susquehanna Coal Co. Colliery No. 5, .....	} Luzerne,.....{	3	2	11	248	222	116	33	10	38	109	792	....	1	31	68	91	17	6	198	41	1,204
Colliery No. 6, .....		3	2	6	253	197	118	1	4	30	96	709	....	1	38	43	95	1	6	187	371	1,080
Colliery No. 7, .....		2	2	11	249	229	90	34	10	70	108	805	1	1	25	50	62	15	6	176	33	1,141
Totals, .....		9	4	28	750	648	224	68	24	138	313	2,306	1	3	94	161	248	33	18	561	1,118	3,425
Delaware, Lackawanna and Western Railroad Co. Auchincloss, .....	} Luzerne,.....{	1	...	4	128	180	26	10	1	109	....	459	....	1	6	8	43	....	3	62	129	588
Buss, .....		1	1	5	202	224	62	2	2	96	54	649	....	1	9	12	99	4	3	168	250	885
Truesdale, .....		1	...	3	137	219	11	9	2	18	37	437	....	1	7	9	67	31	3	60	178	615
Totals, .....		3	1	12	467	623	99	21	5	223	91	1,545	....	3	22	29	215	35	9	230	543	2,088
Lehigh and Wilkes-Barre Coal Co. Wanamie No. 18, .....	} Luzerne,.....{	1	2	6	282	170	74	41	7	70	5	658	....	1	6	29	31	24	4	75	170	828
Sugar Notch No. 9, .....		1	1	5	128	108	23	31	2	51	....	350	....	1	6	15	....	....	3	58	83	433
Totals, .....		2	3	11	410	278	97	72	9	121	5	1,008	....	2	12	44	31	24	7	133	253	1,261
West End Coal Co. West End, .....	} Luzerne,.....{	2	5	1	325	235	41	27	2	50	123	811	2	1	19	25	41	30	3	139	260	1,071
West End washery, .....		2	5	1	325	235	41	27	2	50	123	811	....	1	....	1	....	....	....	10	12	12
Totals, .....		2	5	1	325	235	41	27	2	50	123	811	2	2	19	26	41	30	3	149	272	1,083

Alden Coal Co. ....	1	1	5	109	153	68	36	2	47	.....	485	1	1	9	28	45	30	6	68	188	673
Lehigh Valley Coal Co. ....	1	1	2	59	48	15	10	4	42	.....	182	1	1	5	11	9	5	3	48	83	265
Warrior Run, .....	1	1	2	59	48	15	10	4	42	.....	182	1	1	5	11	9	5	3	48	83	265
Pittston Coal Mining Co. ....	1	.....	1	70	29	11	7	2	8	.....	131	1	2	4	8	22	2	1	31	71	202
Hadleigh, .....	19	15	60	2,250	2,019	653	241	48	629	534	6,468	6	14	165	397	611	159	47	1,220	2,529	8,997
Grand totals, .....	19	15	60	2,250	2,019	653	241	48	629	534	6,468	6	14	165	397	611	159	47	1,220	2,529	8,997

TABLE 3.—Recapitulation

Susquehanna Coal Co., .....	9	4	28	736	618	324	68	24	188	313	2,306	1	3	94	161	248	33	18	561	1,119	3,425
Delaware, Lackawanna and Western Railroad Co. ....	3	1	12	487	623	99	21	5	223	91	1,545	.....	3	22	29	215	35	9	239	543	2,088
Lehigh and Wilkes-Barre Coal Co. ....	2	3	11	410	278	97	72	9	121	5	1,008	.....	2	12	44	31	24	7	133	253	1,261
West End Coal Co., .....	2	5	1	225	225	41	27	2	50	128	811	.....	2	19	28	41	30	3	119	272	1,083
Alden Coal Co., .....	1	1	5	169	158	61	36	2	47	.....	182	1	1	7	28	46	36	3	68	188	673
Lehigh Valley Coal Co., .....	1	1	2	59	48	15	10	4	42	.....	182	1	1	5	11	9	5	3	48	83	265
Pittston Coal Mining Co., .....	1	.....	1	70	29	11	7	2	8	.....	131	1	2	4	8	22	2	1	31	71	202
Totals, .....	19	15	60	2,250	2,019	653	241	48	629	534	6,468	6	14	165	397	611	159	47	1,220	2,529	8,997

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Susquehanna Coal Co. Colliery No. 3, ..... Colliery No. 6, ..... Colliery No. 7, .....	{ Luzerne,..... }	25 24 23	20 22 21	24 26 26	..... ..... .....	12 13 12	22 21 21	19 22 20	22 25 21	20 23 21	23 24 22	20 17 17	17 17 16	224 233 232
Delaware, Lackawanna and Western Railroad Co. Auchincloss, ..... Bliss, ..... Truesdale, .....		21 21 22	18 21 20	24 23 24	..... ..... 21	13 20 22	21 24 19	19 21 17	20 24 19	16 18 15	21 23 17	19 23 18	19 20 17	211 242 231
Lehigh and Wilkes-Barre Coal Co. Wanamaker No. 18, ..... Sugar Notch No. 9, .....		21 21 .....	16 17 .....	20 22 .....	..... ..... .....	12 13 .....	24 24 .....	20 19 .....	20 20 .....	15 16 .....	19 ..... .....	20 ..... .....	17 ..... .....	204 152 .....
West End, ..... West End Coal Co. .... Alden Coal Co. ....	Luzerne,.....	23 ..... .....	21 ..... .....	23 ..... .....	..... ..... .....	7 ..... .....	23 ..... .....	20 ..... .....	22 ..... .....	19 ..... .....	22 ..... .....	19 ..... .....	19 ..... .....	218 ..... .....
Alden, ..... Lehigh Valley Coal Co. ....		22 .....	17 .....	22 .....	..... .....	9 .....	17 .....	18 .....	18 .....	16 .....	19 .....	18 .....	17 .....	193 .....
Warrior Run, ..... Pittston Coal Mining Co. ....		15 .....	11 .....	17 .....	..... .....	7 .....	16 .....	13 .....	1 .....	..... .....	..... .....	..... .....	..... .....	80 .....
Hadleigh, .....	Luzerne,.....	17	11	20	.....	1	9	10	10	2	.....	.....	15	95



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	Martin Barris, .....	Polish, .....	Miner, .....	38	M	1	3	Wanamie No. 18, ....	Luzerne, .....	Fatally injured by explosion of gas. Died January 18.
21	James Evans, .....	American, .....	Drakeman, .....	18	S.	.....	.....	No. 5 colliery, .....	Luzerne, .....	Fatally injured by being run over by cars. Outside. Died January 25.
Feb. 12	Sobek Keonke, .....	Polish, .....	Miner, .....	26	M	1	2	West End, .....	Luzerne, .....	Instantly killed by fall of rock.
19	Bartek Lopushnack, .....	Austrian, .....	Laborer, .....	30	M	1	.....	No. 5 colliery, .....	Luzerne, .....	Instantly killed by premature blast.
28	Paul Yetofski, .....	Polish, .....	Miner, .....	43	M	1	3	No. 7 colliery, .....	Luzerne, .....	Instantly killed by fall of rock.
March 1	John Socil, .....	Austrian, .....	Laborer, .....	41	M	1	.....	No. 5 breaker, .....	Luzerne, .....	Instantly killed by falling into the rolls. Outside.
3	William Sherbin, ....	German, .....	Driver, .....	18	S.	.....	.....	No. 5 colliery, .....	Luzerne, .....	Instantly killed by falling off and being run over by trip of cars.
15	John Pollorilak, .....	Russian, .....	Laborer, .....	26	S.	.....	.....	No. 5 colliery, .....	Luzerne, .....	Fatally injured by being squeezed between car and prop. Died March 29.
May 22	Matt Companack, ....	Italian, .....	Miner, .....	28	M	1	2	West End, .....	Luzerne, .....	Instantly killed by fall of top coal.
28	Geo. Honey, .....	American, .....	Pipeman, .....	32	M	1	3	No. 7 colliery, .....	Luzerne, .....	Fatally injured by falling from top of climax boiler. Died same day. Outside.
June 12	Mike Murz, .....	Polish, .....	Laborer, .....	43	M	1	2	Alden colliery, .....	Luzerne, .....	Fatally injured by premature blast. Died same day.
28	Anthony Roscoski, ...	Slavonian, ...	Miner, .....	35	M	1	.....	Wanamie No. 18, ....	Luzerne, .....	Fatally injured by fall of rock. Died same day.
July 3	John Antolick, .....	Slavonian, ...	Miner, .....	34	M	1	.....	No. 6 colliery, .....	Luzerne, .....	Instantly killed by fall of rock.
3	Frank Devers, .....	Irish, .....	Motorman, .....	26	S.	.....	.....	Auchincloss, .....	Luzerne, .....	Electrocuted by coming in contact with live trolley wire.
Aug. 24	Martin Powalski, ....	Polish, .....	Laborer, .....	23	S.	.....	.....	No. 5 colliery, .....	Luzerne, .....	Instantly killed by fall of rock.
25	Joseph H. Burke, .....	American, ...	Miner, .....	28	M	1	3	No. 5 colliery, .....	Luzerne, .....	Instantly killed by fall of rock.
1	John Shoemaker, ....	American, ...	Pumprunner	36	M	1	4	Warrior Run, .....	Luzerne, .....	Fatally injured by explosion of gas. Died same day.
6	Stanley Opawa, .....	Polish, .....	Miner, .....	38	M	1	4	North shaft, No. 7 colliery, .....	Luzerne, .....	Fatally injured by explosion of gas. Died same day.
6	Edward Malkowski, ..	Polish, .....	Miner, .....	25	M	1	3	North shaft, No. 7 colliery, .....	Luzerne, .....	Fatally injured by explosion of gas. Died August 8.
6	Bartek Sheelka, .....	Polish, .....	Laborer, .....	25	S.	.....	.....	North shaft, No. 7 colliery, .....	Luzerne, .....	Fatally injured by explosion of gas. Died August 17.
6	Mike Robolinski, ....	Polish, .....	Miner, .....	41	M	1	2	North shaft, No. 7 colliery, .....	Luzerne, .....	Fatally injured by explosion of gas. Died August 17.
6	Michael Mellitz, .....	Slavonian, ...	Laborer, .....	20	S.	.....	.....	North shaft, No. 7 colliery, .....	Luzerne, .....	Fatally injured by explosion of gas. Died August 17.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Aug. 6	Joe Zelack, .....	Polish,.....	Laborer, ...	32	S. ....	.....	.....	North shaft, No. 7 colliery.	Luzerne,.....	Fatally injured by explosion of gas. Died
13	Mich Killey, .....	American,...	Miner, .....	38	M. ....	1	.....	Wanamunk, .....	Luzerne,.....	Instantly killed by fall of coal.
23	Stephen Rumbetzeski, .....	Polish,.....	Timberman	44	M. ....	5	.....	No. 6 colliery, .....	Luzerne,.....	Instantly killed by fall of rock.
23	William Vincent, Sr., .....	Welsh,.....	Miner, .....	67	M. ....	1	.....	Sugar Notch, .....	Luzerne,.....	Fatally burned by explosion of gas. Died
23	Frank Ruda, .....	Polish,.....	Miner, .....	31	M. ....	1	2	Sugar Notch, .....	Luzerne,.....	Fatally burned by explosion of gas. Died
Sept. 11	Uoyte Hess, .....	American,...	Engineer, ...	23	M. ....	1	.....	No. 5 colliery, .....	Luzerne,.....	Instantly killed by fall of rock.
Oct. 10	Frank Guralski, .....	Polish,.....	Miner, .....	38	M. ....	1	5	No. 7 colliery, .....	Luzerne,.....	Instantly killed by fall of rock.
11	Thomas Mazur, .....	Welsh,.....	Rockman, ...	29	S. ....	.....	.....	Alden colliery, .....	Luzerne,.....	Fatally injured by premature blast.
21	Peter Kwasnik, .....	Polish,.....	Miner, .....	24	S. ....	.....	.....	No. 7 colliery, .....	Luzerne,.....	Fatally injured by explosion of gas. Died
Nov. 7	Mathew Zitterman, .....	Polish,.....	Laborer, ...	61	M. ....	1	.....	No. 6 colliery, .....	Luzerne,.....	Fatally injured by being run over by cars. Outside. Died same day.
7	Eld Houseknecht, .....	American,...	Headman, ...	19	S. ....	.....	.....	West End, .....	Luzerne,.....	Fatally injured by being run over by cars. Died same day.
12	Mich. Wacellis, .....	Lithuanian, .....	Slatepicker, .....	17	S. ....	.....	.....	No. 6 breaker, .....	Luzerne,.....	Instantly killed by being crushed in scrapper line.
18	Frank Beenic, .....	Polish,.....	Miner, .....	55	M. ....	1	3	No. 7 colliery, .....	Luzerne,.....	Fatally injured by fall of rock. Died December 23.
21	Ray Van Horn, .....	American,...	Driver, .....	17	S. ....	.....	.....	West End, .....	Luzerne,.....	Fatally injured by being struck by runaway cars on slope. Died same day.
Dec. 1	Lawrence Butovage, .....	Polish,.....	Laborer, ...	35	M. ....	1	2	No. 6 breaker, .....	Luzerne,.....	Fatally injured by being squeezed between car and stone wall under breaker. Died same day.
5	Andrew Bigosh, .....	Polish,.....	Laborer, ...	32	S. ....	.....	.....	No. 7 colliery, .....	Luzerne,.....	Fatally injured by an explosion of gas. Died December 20.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	Walter Stackhouse, ...	American...	Trackman, ...	27	M.	West End, ...	Luzerne,.....	Back and legs bruised by being squeezed between car and roof.
4	Andrew Koteh, ...	Lithuanian...	Miner, ...	36	M.	Bliss, ...	Luzerne,.....	Hand bruised by piece of coal falling on it.
10	Charles Vanborn, ...	American...	Laborer, ...	24	S.	West End, ...	Luzerne,.....	Arm broken by piece of coal falling on it.
12	Frank Koashinski, ...	Polish...	Laborer, ...	17	S.	No. 7 colliery, ...	Luzerne,.....	Body and legs squeezed between two cars. Outside.
17	Theodore Grodzitski, ...	Polish...	Miner, ...	30	S.	No. 5 colliery, ...	Luzerne,.....	Shoulder and leg bruised by fall of rock.
19	Charles Bendinski, ...	Lithuanian...	Doorboy, ...	17	S.	Warrior Run, ...	Luzerne,.....	Arm bruised by being run over by car.
Feb. 6	Bernard Sturtz, ...	Polish...	Slatepicker, ...	15	S.	Truesdale, ...	Luzerne,.....	Arm and three ribs broken by being caught in conveyor belt. Outside.
8	Mike Gordowick, ...	Polish...	Laborer, ...	29	M.	No. 7 colliery, ...	Luzerne,.....	Fingers smashed by being caught in coupling.
15	Martin Levelis, ...	Lithuanian...	Miner, ...	45	M.	Wanamie, ...	Luzerne,.....	Head and neck by battery breaking.
17	Joseph Norman, ...	American...	Slatepicker, ...	18	S.	Truesdale, ...	Luzerne,.....	Arm broken by being caught in moving machinery. Outside.
21	Stanley Nichols, ...	Polish...	Laborer, ...	28	M.	West End, ...	Luzerne,.....	Foot cut off by cars. Outside.
24	Alex Galashefski, ...	Polish...	Laborer, ...	22	S.	No. 5 colliery, ...	Luzerne,.....	Back bruised by fall of rock.
26	Mike Prysloski, ...	Austrian...	Laborer, ...	33	M.	No. 6 colliery, ...	Luzerne,.....	Burned by gas.
27	Joe Kolchemirik, ...	Polish...	Miner, ...	45	M.	Wanamie, ...	Luzerne,.....	Body and leg bruised by fall of coal.
March 2	Peter Swanbury, ...	American...	Oilier, ...	16	S.	Alden breaker, ...	Luzerne,.....	Arm torn off by being caught in machinery. Outside.
9	Matt. Fololonski, ...	Polish...	Laborer, ...	50	M.	Warrior Run, ...	Luzerne,.....	Thumb and four ribs by fall of coal.
13	John Kebba, ...	Polish...	Slatepicker, ...	14	S.	No. 6 breaker, ...	Luzerne,.....	Thumb smashed by being caught in machinery. Outside.
17	George Smith, ...	American...	Driver, ...	23	S.	Wanamie No. 18, ...	Luzerne,.....	Arm broken and body bruised by being struck by car on chamber road.
22	Jno. Richvalski, ...	Slavonian...	Laborer, ...	37	M.	No. 6 colliery, ...	Luzerne,.....	Back broken by fall of slate.
24	Edward Hololeck, Jr., ...	German...	Doorboy, ...	17	S.	Bliss, ...	Luzerne,.....	Foot bruised between bumper of motor and rail.
28	Alex Visniefski, ...	Polish...	Miner, ...	42	M.	No. 5 colliery, ...	Luzerne,.....	Leg broken and body bruised by being run over by cars.
29	Michael Elias, ...	Slavonian...	Driver, ...	17	S.	No. 6 colliery, ...	Luzerne,.....	Jaw bone broken. Kicked by mule.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
May	19 William Lye, .....	English, .....	Driver, .....	22	S.	No. 5 colliery, .....	Luzerne, .....	Kicked on face by mule.
	23 Thos. Rowlands, .....	Welsh, .....	Miner, .....	40	M.	No. 5 colliery, .....	Luzerne, .....	Face and head cut by fall of slate.
	25 Martin Soger, .....	Russian, .....	Laborer, .....	30	S.	No. 7 colliery, .....	Luzerne, .....	Back bruised and sprained by fall of rock.
June	28 John Babchofsky, .....	Polish, .....	Laborer, .....	23	S.	Hadleigh, .....	Luzerne, .....	Arm broken by fall of rock.
	1 Ludwig Zabloniski, .....	Polish, .....	Laborer, .....	27	M.	No. 7 colliery, .....	Luzerne, .....	Arm broken by falling down chamber.
	6 Benjamin Faux, .....	American, .....	Carpenter, .....	59	M.	No. 5 colliery, No. 2 breaker, .....	Luzerne, .....	Ankle broken and hip dislocated by being hit by cage in breaker tower. Outside.
7 Variste Terrari, .....	Italian, .....	Laborer, .....	21	S.	Truesdale, .....	Luzerne, .....	Leg fractured by falling down chamber.	
8 Theopel Stavish, .....	Polish, .....	Miner, .....	37	M.	Wanamie No. 18, .....	Luzerne, .....	Cut on face and body and knee dislocated by fall of coal.	
9 Jno. Baelus, .....	Polish, .....	Miner, .....	38	M.	No. 5 colliery, .....	Luzerne, .....	Bruised on head and body by fall of slate.	
11 John Koplin, .....	Russian, .....	Laborer, .....	31	M.	Truesdale, .....	Luzerne, .....	Hand crushed by cars while coupling them. Outside.	
11 Andrew Schett, .....	Slavonian, .....	Miner, .....	40	M.	Truesdale, .....	Luzerne, .....	Leg fractured by fall of rock.	
12 John Furman, .....	Polish, .....	Miner, .....	22	M.	Alden colliery, .....	Luzerne, .....	Cut and bruised on head and body by premature blast.	
19 Robert Jones, .....	Welsh, .....	Miner, .....	45	M.	Wanamie, .....	Luzerne, .....	Burned on face and hands by explosion of gas.	
27 Albert Davis, .....	Welsh, .....	Miner, .....	45	S.	Truesdale, .....	Luzerne, .....	Hip fractured by car jumping the track and striking him.	
29 John Burke, .....	Irish, .....	Fuelman, .....	18	S.	Sugar Notch colliery, .....	Luzerne, .....	Ankle bruised by being run over by car. Outside.	
July	2 John Petratchki, .....	Russian, .....	Miner, .....	34	M.	Alden No. 2 shaft, .....	Luzerne, .....	Leg broken by fall of rock.
	3 George Gineter, .....	Slavonian, .....	Trackman, .....	40	M.	No. 7 colliery, .....	Luzerne, .....	Face cut and finger cut off by runaway on slope.
	3 Sam Gibbs, .....	American, .....	Timberman, .....	29	S.	No. 7 colliery, .....	Luzerne, .....	Face and head cut by runaway on slope.
	13 John Kenyinski, .....	Russian, .....	Miner, .....	59	M.	No. 5 colliery, .....	Luzerne, .....	Skull fractured by prop falling on him.
14 John McNealus, .....	American, .....	Blacksmith, .....	22	S.	No. 5 colliery, .....	Luzerne, .....	Head and back bruised by being struck by piece of coal which fell down breaker tower. Outside.	
14 Patrick Keating, .....	Irish, .....	Driver, .....	17	S.	No. 7 colliery, .....	Luzerne, .....	Leg broken and hand hurt by fall of rock.	



July	17	John Thombora, .....	Polish, .....	Ashman, .....	21	S.	West End, .....	Luzerne, .....	Arm torn off. While repairing scraper line his coat caught in it and he was drawn in. Outside. Bruised about hips by being squeezed by cars.
	18	Frank Shemanski, .....	German, .....	Road cleaner, .....	66	M.	No. 5 colliery, .....	Luzerne, .....	Arm broken by blast. He went back too soon, thinking it had missed fire. Cut on head and body by fall of rock. Head and back squeezed between car and rib.
	27	Michael Glafoki, .....	Polish, .....	Miner, .....	42	M.	No. 6 colliery, .....	Luzerne, .....	Ribs fractured. Squeezed between mule and door.
	27	E. J. Jones, .....	Welsh, .....	Company laborer, .....	45	S.	Bliss, .....	Luzerne, .....	Burned by explosion of gas.
	31	John Furmauch, .....	Polish, .....	Laborer, .....	48	S.	No. 7 colliery, .....	Luzerne, .....	Nose fractured by being kicked by a mule. Squeezed between car and breaker foundation. Outside.
Aug.	4	Ignatus Fogulst, .....	Polish, .....	Doorboy, .....	16	S.	No. 5 colliery, .....	Luzerne, .....	Burned by an explosion of gas.
	6	Frank Leman, .....	Polish, .....	Driver, .....	18	S.	No. 7 colliery, .....	Luzerne, .....	Arm broken by prop falling on it.
	14	William Oliver, .....	American, .....	Doorboy, .....	16	S.	No. 6 colliery, .....	Luzerne, .....	Leg squeezed between car and engine. Outside.
	22	Kosik Boogons, .....	Polish, .....	Laborer, .....	23	S.	Sugar Notch No. 9, ..	Luzerne, .....	Back injured by fall of coal.
Sept.	23	William Vincent, Jr., .....	Welsh, .....	Fire boss, .....	30	S.	Wanamie No. 18, ..	Luzerne, .....	While uncoupling cars he had fingers smashed.
	26	James Sullivan, .....	American, .....	Machineist, .....	54	M.	No. 7 colliery, .....	Luzerne, .....	Ribs fractured by falling against prop.
	6	Frank Wheeler, .....	English, .....	Miner, .....	39	M.	Bliss colliery, .....	Luzerne, .....	Legs broken by being run over by car.
	15	Fred Ruddick, .....	English, .....	Headman, .....	27	S.	Bliss colliery, .....	Luzerne, .....	Ankle dislocated by being struck by flying coal from blast.
	18	Frank Sovick, .....	Polish, .....	Miner, .....	45	M.	No. 7 colliery, .....	Luzerne, .....	Leg squeezed between cars at foot of shaft.
	22	Mike Struzinski, .....	Polish, .....	Coupler, .....	17	S.	No. 7 colliery, .....	Luzerne, .....	Jaw fractured and cut on head by fall of coal.
	27	Wladis Donbavage, .....	American, .....	Miner, .....	38	M.	No. 7 colliery, .....	Luzerne, .....	Knee bruised. Squeezed between cars. Injured by premature blast.
	29	Vincent Viarulet, .....	Polish, .....	Footman, .....	25	M.	No. 5 colliery, .....	Luzerne, .....	Skull fractured by premature blast. The miner lighted two holes at one time and thinking they had gone off at the same time, he and his laborer went back to face before second hole discharged.
Oct.	8	Frank Reifski, .....	Polish, .....	Laborer, .....	24	S.	No. 7 colliery, .....	Luzerne, .....	Pack and body bruised by fall of coal. Bruised on back and legs by fall of rock. Hip and abdomen bruised by prop falling on him.
	9	James R. Urn, .....	American, .....	Driver, .....	27	S.	No. 7 colliery, .....	Luzerne, .....	Pell off railroad car and fractured a rib.
	11	William Woolburn, .....	English, .....	Laborer, .....	32	M.	Widen No. 2 shaft, ..	Luzerne, .....	Leg broken by fall of rock.
	13	Joe Zelcznak, .....	Hungarian, .....	Laborer, .....	33	S.	West End, .....	Luzerne, .....	Cut on nose by being hit by lever under breaker.
	24	Barney Machinski, .....	Polish, .....	Miner, .....	28	S.	Truesdale, .....	Luzerne, .....	Bruised about head, back and legs by falling under moving timber.
	27	Bruno Peters, .....	Polish, .....	Munch, .....	43	M.	Bliss, .....	Luzerne, .....	Fell from timber on which he was climbing and fractured hip bone.
	28	Charles McHugh, .....	American, .....	Runner, .....	19	S.	Wanamie, .....	Luzerne, .....	
Nov.	14	Walter Goshinski, .....	Polish, .....	Laborer, .....	58	M.	No. 5 colliery, .....	Luzerne, .....	
	27	George Joleretto, .....	Italian, .....	Miner, .....	42	M.	West End, .....	Luzerne, .....	
	6	John Demski, .....	Polish, .....	Miner, .....	44	M.	No. 6 colliery, .....	Luzerne, .....	
Dec.	7	Theodore Poltrock, .....	German, .....	Carpenter, .....	45	M.	No. 6 colliery, .....	Luzerne, .....	
	10	Joseph Shemanski, .....	Polish, .....	Driver, .....	16	S.	North shaft, No. 7 colliery, ..	Luzerne, .....	
	20	Gus Ball, .....	American, .....	Slatepicker, .....	16	S.	Auchinleck, .....	Luzerne, .....	



## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

March 22, West End Colliery, Natt Companack, Italian, miner, was instantly killed by fall of coal.

August 13, Wanamie Colliery, Michael Killey, American, miner, was instantly killed by fall of coal at the face of his chamber.

February 12, West End Colliery, Sobek Keonke, Polish, miner, was instantly killed by fall of rock at the face of his chamber.

February 28, South Shaft, Number 7 Colliery, Susquehanna Coal Company, Paul Yetofski, Polish, miner, was instantly killed at the face of his chamber by fall of rock.

June 28, Wanamie Number 18 Colliery, Anthony Roscoski, Slavonian, miner, was fatally injured by fall of rock at the face of his chamber. He died same day.

July 3, Number 6 Tunnel, Number 6 Colliery, John Antolick, Slavonian, miner, was instantly killed by fall of rock.

July 25, Number 5 Colliery, Susquehanna Coal Company, Joseph H. Burke, American, miner, was instantly killed by fall of rock at the face of his chamber.

August 23, Number 6 Colliery, Susquehanna Coal Company, Stephen Rumbetzeski, Polish, timberman, was instantly killed by fall of rock while placing set of timber on gangway road.

July 24, Number 5 Colliery, Susquehanna Coal Company, Martin Powalski, Polish, laborer, was instantly killed by fall of rock.

September 11, Number 5 Colliery, Susquehanna Coal Company, Hoyte Hess, American, engineer, was instantly killed by fall of rock at head of plane. A runaway occurred on the plane, and as the light cars came over the head they left the track displacing several props. A few minutes later as Hess came to the head of the plane a piece of rock fell, killing him.

October 10, Number 7 Colliery, Susquehanna Coal Company, Frank Goralski, Polish, miner, was instantly killed by fall of rock at the face of his chamber.

November 18, Number 7 Colliery, Susquehanna Coal Company, Frank Beenick, Polish, miner, was fatally injured by fall of rock at the face of his chamber. He died December 23.

## Cars

January 21, Number 5 Colliery, Susquehanna Coal Company, James Evans, American, brakeman, while riding on front end of a trip of cars, fell off and was run over by the cars. He died from his injuries January 25. Outside.

March 3, Number 5 Colliery, Susquehanna Coal Company, William Sherbin, German, driver, was instantly killed by falling off cars and being run over by them on gangway road.

March 15, Number 5 Colliery, Susquehanna Coal Company, John Poliorilak, Russian, laborer, was fatally injured by being squeezed between car and prop. He died March 20.

November 7, Number 6 Colliery, Susquehanna Coal Company, Mathew Zitterman, Polish, laborer, while cleaning the rail road track, was struck and run over by cars. He died same day. Outside.

November 7, West End Colliery, Boid Houseknecht, American, headman, was fatally injured by being run over by cars at head of slope. As the trip was coming over the head he jumped on, but in some manner he slipped and fell in front of the trip. He died same day.

November 21, West End Colliery, Ray Van Horn, American, driver, was walking up the slope after work when a trip of empty cars ran away, striking him and inflicting injuries that proved fatal. He died same day.

December 1, Number 6 Colliery, Susquehanna Coal Company, Lawrence Butovage, Polish, laborer, was fatally injured by being squeezed between car and stone wall under breaker.

### Explosions of Gas

January 2, Wanamie Number 18, Martin Barris, Polish, miner, was fatally injured by explosion of gas. He worked in a chamber about forty feet up from the gangway road. He prepared a blast, inserted a match in needle hole, lit it, and went to the gangway, going through a door on the gangway and leaving it open. The hole missed fire and Barris returned to try another match that also missed fire. This operation was repeated five times, the gangway door being left open all the time. This allowed a quantity of gas to accumulate at face of chamber, and when he went back the sixth time he lit the gas and an explosion occurred in which he was badly burned. He died January 18.

August 1, Warrior Run Colliery, John Shoemaker, American, pump runner, was fatally injured by explosion of gas. He died same day.

A serious squeeze occurred in the North Basin, extending from the top of the Anticline in the E vein, to the lowest lift, and affecting the E, F, D, C, and B veins, within an area of 40 acres. All of the men were withdrawn, with the exception of the foremen, fire bosses, pump runners and a few experienced miners.

While these men were engaged in getting out the mules and keeping watch on the situation, the pump runner at the Third Lift, John Shoemaker, was missed, and upon investigation his body was found in the Third Lift Tunnel.

He was still living but died before reaching his home. The exact cause of his death is unknown. The left side of his face and mustache were singed; his leg was broken and body contused. He was found under the inside or cheek ventilating door, which had been lifted from its hinges and blown down. He had been instructed to stay at his pump station, in the intake on the west side of the slope, but was found 1,000 feet from this point with his naked lamp at his side, showing that he had wandered of his own accord into the affected district. It is conjectural, as to whether he was caught in the end of a concussion of air due to a cave or an explosion some distance from the place where his body was found. An examination was impossible beyond the E vein where he was found, on account of standing gas.

The squeeze by this time had become so extensive that it was impossible to make further examination beyond the slope, and a short time after 6 P. M. a very heavy explosion or cave in occurred, sending black clouds up the upcast of the fan at the surface. About this time a dwelling house, occupied by John E. Williams, caught fire,

and another adjoining house, occupied by Manus Waters, was lifted from its foundation. These houses were directly over the Anticline or the beginning of the North Basin, with an interval of 350 feet of rock cover between the surface and the E vein.

The ground in this vicinity was cracked, out of which gas exuded and was ignited from the Williams house fire. The house fire was caused by one of the family going into the cellar and striking a match. The fire at the Waters house is supposed to have been caused by the ignition of gas through the cracks in the ground from the Williams fire. The fire gained such rapid headway in the Williams house, that it was impossible for a daughter, Maggie Williams, to escape. It appeared that she was in the basement or cellar, at the time of the breaking out of the fire. She was burned to death.

By this time the main return was found heavily charged with  $\text{CH}_4$ ,  $\text{CO}_2$ , and wood smoke, showing the evidence of a fire in the mine. Explosive gas was also found exuding from the cracks in the ground on other portions of the surface in the affected area.

On the following day the mules were removed from the mine. The squeeze still continued, and careful watch was kept on the situation. Emergency fans were constructed—a twenty foot suction fan at the E vein upcast, and double 8 foot blowing fan at the mouth of No. 1 Slope. Every indication pointed to a continuance of a fire, but owing to the caved ground the location could not be reached.

The mine also continued to give off an amount of explosive gas.

The squeeze also continued and it was finally decided after a consultation between State Mine Inspector and officials of the Coal Company to seal off the affected district and flood the lower levels.

Accordingly on the 15th of August, the intake and upcast were sealed off and the fan stopped. An emergency pump was placed at Sugar Notch and a pipe line, 12,000 feet in length, laid to the Colliery. Connections were made to Spring Brook pipe and all the available water in the vicinity was run into the mine. Chemical and Shaw Machine tests were made at intervals of the gases taken from the sealed upcast of the fan, and on November 30, there being no indication of existing fire, the mine was re-opened, and the fan started. The ventilation was re-established and all the available openings cleared of standing gases. Work was started and the caved Third Lift Tunnel, at the point where Shoemaker's body was found was re-opened. At the mouth of E vein gangway, on the 20th of December, fire, however, was found. Since that time good progress has been made fighting the fire, as the caved ground is re-opened, with every indication of soon extinguishing it and with prospects of a resumption of mining at this colliery at an early date.

The task of fighting the fire was very hazardous and too much credit cannot be given Superintendent F. E. Zerbey of the Lehigh Valley Coal Company for the able manner in which he conducted matters. He adopted plans by which the fire was to be extinguished, and they were executed without the slightest injury to any person. In return he was assisted by District Superintendent Thomas Jones, Mine Foreman William Williams and several other officials and workmen of the Company.

August 6, North Shaft, No. 7 Colliery, Susquehanna Coal Company, Cooper Seam, an explosion of gas occurred in which Stanley Opawa, Polish, miner, Edward Malkovski, Polish, miner, Bartek Sheelka, Polish, laborer, Michael Robolinski, Polish, miner, Michael



Mellitz, Slavonian, laborer, and Joseph Zelack, Polish, laborer, lost their lives.

The accident occurred about 2 o'clock in the afternoon. The fire boss, in making his examination of this particular section in the morning, reported it as being free from gas. He also visited this section on his second trip that day and still found it free from gas.

At an inquest held in Nanticoke, it appeared, from the testimony given, that Stanley Opawa, a miner, was engaged in driving a line chamber, and the other men, who were killed, were working within a radius of about 300 feet from his chamber when the explosion occurred. It was further stated that Opawa drilled a hole in the face of his chamber, charged it with dynamite, connected his battery, which stood about 100 feet from the face of the chamber, notified those in the immediate vicinity of his intention to fire, and then pulled the battery discharging the blast. It in turn ignited a body of gas which had accumulated at the face of his chamber, fatally burning him and the five other men.

August 23, Sugar Notch, Number 9, William Vincent, Sr., Welsh, and Frank Ruda, Polish, miners, were fatally burned by an explosion of gas. A bratticeman went up an abandoned chamber to take down a brattice and when about half way up he lit a number of feeders. He went away allowing them to burn. About forty-five minutes later, when Vincent and Ruda and a few others came along and stood on the gangway at foot of the chamber, deciding in what manner they should extinguish the fire, an explosion suddenly occurred, fatally burning Vincent and Ruda.

The fire was in the chamber, which is the direct return from the inside workings and has a pitch of about 25 degrees. This retarded the air sufficiently to allow gas to accumulate, and come down on the fire.

October 24, Number 7 Colliery, Susquehanna Coal Company, Peter Kwasnik, Polish, miner, while working at the face of his chamber, ignited a body of gas and he received burns from which he died October 28. He would not explain how he was burned, but as his safety lamp was found open, it is presumed he was either lighting it, or using it as an open light.

December 5, Number 7 Colliery, Susquehanna Coal Company, Andrew Bigosh, Polish, laborer, was fatally injured by an explosion of gas. He died December 20. After being out of his chamber for about half an hour he returned and opened his lamp to light a cigarette. In doing so he also lit the gas that had accumulated during his absence.

#### Premature Blasts

February 19, Number 5 Colliery, Susquehanna Coal Company, Bartek Lopushnack, Austrian, laborer, was instantly killed by premature blast while assisting his miner to fire a rock hole.

June 12, Alden Colliery, Mike Murz, Polish, laborer, was fatally injured by premature blast while assisting his miner to charge a hole.

October 11, Alden Colliery, Thomas Mazer, Welsh, rockman, was instantly killed by a premature blast.

#### Machinery

March 1, Number 5 Colliery, Susquehanna Coal Company, John Socil, Austrian, laborer, was instantly killed by falling into the rolls.

May 28, Number 7 Colliery, Susquehanna Coal Company, George Honey, American, pipeman, was fatally injured by falling from top of climax boiler. He died the same day.

November 12, Number 6 Colliery, Susquehanna Coal Company, Michael Wacellis, Lithuanian, slate picker, was instantly killed by being caught in scraper line.

### Electricity

July 23, Auchincloss Colliery, Delaware, Lackawanna and Western Railroad Company, Frank Devers, Irish, motorman, was electrocuted by coming in contact with trolley wire while attempting to put trolley on.

## CONDITION OF COLLIERIES

### SUSQUEHANNA COAL COMPANY

Number 5 Colliery.—Ventilation fair, roads and drainage fair. Condition as to safety, good.

Number 6 Colliery.—Ventilation fair, roads and drainage fair. Condition as to safety, good.

Number 7 Colliery.—Ventilation fair, roads and drainage fair. Condition as to safety, good.

### DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss Colliery.—Ventilation fair, roads and drainage good. Condition as to safety, good.

Bliss Colliery.—Ventilation good, roads and drainage good. Condition as to safety good.

Truesdale Colliery.—Ventilation fair, roads and drainage fair. Condition as to safety, good.

### LEHIGH AND WILKES-BARRE COAL COMPANY

Wanamie Colliery.—Ventilation good, roads and drainage good. Condition as to safety, good.

Sugar Notch Colliery.—Ventilation good, roads and drainage good. Condition as to safety, good.

### WEST END COAL COMPANY

West End Colliery.—Ventilation fair, roads and drainage fair. Condition as to safety, good.

Alden Colliery.—Ventilation good, roads and drainage fair. Condition as to safety, good.

### LEHIGH VALLEY COAL COMPANY

Warrior Run Colliery.—Ventilation fair, roads and drainage fair. Condition as to safety, good.

### PITTSTON COAL MINING COMPANY

Hadleigh Colliery.—Ventilation fair, roads and drainage fair. Condition as to safety, good.



## IMPROVEMENTS

## SUSQUEHANNA COAL COMPANY

## Number 5 Colliery, Outside

One pair 16x30 engines erected at No. 5 Breaker to hoist coal into breaker.

One pair 16x24 engines erected on dirt bank.

One battery of 500 H. P., B. and W. boilers erected, making this plant now 2,500 H. P.

One 400 H. P. Climax boiler erected on No. 5 dirt bank, replacing old cylinder boiler plant.

## Inside

Number 2 Shaft.—New pneumatic haulage plant installed with three stage Norwalk compressor 22 inch steam, 16 inch and  $\frac{1}{2}$  inch by  $5\frac{5}{8}$  inch air, 24 inch stroke and Porter pneumatic locomotive 8x14 inch with air line carrying 1,000 pounds pressure.

Number 4 Shaft.—New plane from Bottom to Top Ross.

Tunnel from South tunnel to Twin vein.

New slope from the Basin to Top Ross.

## Number 6 Colliery, Outside

Two 400 H. P. Climax boilers at No. 7 Shaft.

## Inside

Tunnel from Bottom to Top Ross in No. 6 tunnel.

New plane No. 1, Shaft No. 7, 159 yards.

New plane No. 2, Shaft No. 7, 196 yards.

New dirt and rock conveyor to carry waste material from breaker to foot of dirt plane. Outside.

New Slope Bottom Ross, Shaft No. 7, 80 yards. Inside.

## Number 7 Colliery, Outside

New boiler coal conveyor.

## Inside

A plane from Forge to Cooper Seams, No. 1 N. Shaft, 79 yards.

Second opening Hillman vein.

New slope Forge Seam.

## DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

## Auchincloss Colliery

Four rock tunnels 7x12 have been driven through faults, connecting Ross and Baltimore veins, also Mills and Hillman veins, for ventilation, development, etc.

The installation of a 16 foot dust fan, mechanical pickers, etc., in this breaker, has added decidedly to its efficiency.

A  $19\frac{1}{2}$ x $19\frac{1}{2}$  brick and concrete lamp house has been erected.

## Bliss Colliery

Two rock tunnels 7x12 have been driven from Baltimore vein to Forge vein.

With the intention of preventing mine fires this company has erected in its inside pump rooms and engine rooms, brick and concrete walls with iron I-beams.

### Truesdale Colliery

A 12 foot ventilating fan has been erected on Truesdale tunnel. This fan is driven by a 30 H. P. induction electric motor and gives very good satisfaction.

### LEHIGH AND WILKES-BARRE COAL COMPANY

#### Sugar Notch No. 9., Outside

Brick power house, Colliery shop, brick oil house, new breaker finished, 24 inch by 42 inch hoisting engines and brick house. Brick locomotive house.

#### Inside

Number 17 Tunnel extended to Baltimore Tunnel, Ross to Twin. Compound duplex pump and room.

#### Wanamie No. 18., Outside

Addition to mule barn at No. 19, new mule barn at No. 18. Brick oil house.

#### Inside

Number 15 Tunnel Baltimore to Cooper. Number 16 Tunnel Baltimore to Cooper. Number 17 Tunnel Baltimore to Red Ash to Top Red Ash. Number 18 Tunnel Red Ash to Top Red Ash.

### LEHIGH VALLEY COAL COMPANY

#### Warrior Run Colliery

A new Washery was completed, capacity 800 tons per day. It was built for the purpose of reclaiming the old culm banks, also as an addition to the breaker to handle the wet or mud screen coal from the mines. The washery is complete with conveyors, elevators, shakers and mechanical pickers, with Williams crusher and silt outfit for handling the refuse to the mines.

A 12 inch steam pipe bore hole completed from the surface to the inside pump, and new steam line from boiler house down said hole. This dispenses with the old steam pipe line down to No. 1 Slope.

## Eleventh District

LUZERNE AND CARBON COUNTIES

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Hazleton, Pa., February 26, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Eleventh Anthracite District for the year ending December 31, 1906.

The report contains in addition to the usual tables required by law, a revised report of the arbitrators on the dam placed between Cranberry Colliery, of A. Pardee and Company, and the Harwood Colliery, of C. Pardee and Company, in the Parlor vein. A complete report of the revised plan will be found embodied herein.

Respectfully submitted,

DAVID J. RODERICK,

Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	29
Number of mines, .....	110
Number of mines in operation, .....	109
Number of tons of coal shipped to market, .....	5,234,548
Number of tons used at mines for steam and heat, .....	759,410
Number of tons sold to local trade and used by employes, .....	145,993
Number of tons produced, .....	6,139,951
Number of persons employed inside of mines, .....	9,371
Number of persons employed outside, .....	5,306
Number of fatal accidents inside of mines, .....	30
Number of fatal accidents outside, .....	11
Number of non-fatal accidents inside of mines, .....	95
Number of non-fatal accidents outside .....	25
Number of tons of coal produced per fatal accident inside, .....	204,665
Number of persons employed per fatal accident inside, ..	312
Number of persons employed per fatal accident outside, ..	482
Number of persons employed per non-fatal accident inside, .....	99
Number of persons employed per non-fatal accident outside, .....	212
Number of wives made widows, .....	29
Number of children orphaned, .....	70
Number of steam locomotives used inside of mines, .....	18
Number of steam locomotives used outside, .....	106
Number of compressed air locomotives used inside, .....	13
Number of electric motors used inside, .....	8
Number of electric motors used outside, .....	2
Number of fans in use, .....	58
Number of furnaces in use, .....	1
Number of gaseous mines in operation, .....	30
Number of non-gaseous mines in operation, .....	79

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Coal and Navigation Company, .....	1,348,430
Coxe Brothers and Company, Incorporated, .....	956,418
G. B. Markle and Company, .....	855,602
Lehigh Valley Coal Company, .....	742,825
Pardee Brothers and Company, .....	487,277
A. Pardee and Company, .....	466,809
Estate A. S. Van Wickle, .....	267,558
Calvin Pardee and Company, .....	265,402
Upper Lehigh Coal Company, .....	225,340
C. M. Dodson and Company, .....	168,559
John S. Wentz and Company, .....	133,650
Hazle Mountain Coal Company, .....	106,537
M. S. Kemmerer and Company, .....	52,849
Pond Creek Coal Company, .....	25,695
Black Creek Coal Company, .....	13,175
Hacklebernie, Coal Company, .....	12,249
Stauffer and Rowe, .....	6,952
Thomas R. Reese and Son, .....	4,624
Total, .....	<u>6,139,951</u>

## Production by Counties

Luzerne, .....	4,133,859
Carbon, .....	<u>2,006,092</u>
Total, .....	<u>6,139,951</u>



TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Coal and Navigation Co., .....	3	2	5	10	8	18	449,477	134,843	1,908	1,097	3,005	636	548	191	86
Coxe Brothers and Co., Inc., .....	1	4	5	10	8	18	956,418	95,642	1,110	688	1,798	1,110	172	111	88
G. B. Markle and Co., Inc., .....	1	4	5	10	8	18	122,229	65,816	1,147	428	1,575	1,147	164	88	128
Lehigh Valley Coal Co., .....	11	2	13	27	5	32	67,530	27,512	1,507	638	2,145	1,37	319	56	139
Pardee Brothers and Co., .....	1	2	3	6	4	10	487,277	81,213	707	481	1,188	707	221	147	129
A. Pardee and Co., .....	4	1	5	6	4	10	116,762	77,801	882	371	1,253	882	274	98	91
Estate A. S. Van Winkle, .....	1	1	2	4	3	7	66,889	66,889	330	274	604	330	413	59	165
Calvin Pardee and Co., .....	1	1	2	2	3	5	265,402	37,915	413	315	728	413	289	162	165
Upper Lehigh Coal Co., .....	1	1	2	2	3	5	225,340	112,670	255	289	615	255	290	162	165
C. M. Dodson and Co., .....	1	1	2	1	1	2	168,559	168,559	300	188	488	300	89	200	162
John S. Wentz and Co., .....	1	2	3	1	1	2	133,650	133,650	197	178	376	197	89	192	164
Hazle Mountain Coal Co., .....	1	1	2	1	2	3	15,219	15,219	110	79	296	110	110	24	64
M. S. Kemmerer and Co., .....	1	1	2	1	1	2	52,849	52,849	213	150	363	213	150	110	64
Miscellaneous Companies, .....	30	11	41	95	25	120	204,665	64,631	9,371	5,306	14,677	312	482	99	212
Totals and averages for district, .....	30	11	41	95	25	120	204,665	64,631	9,371	5,306	14,677	312	482	99	212

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....		1			2			1	1		2		7	23.33
Falls of slate, .....							1	1					2	6.67
Falls of roof, .....							1						1	3.33
Mine cars, .....	1				1			1		1			4	13.34
Explosions of gas and dust, .....						1				1			1	3.33
Suffocation by gas, etc., .....					1								1	3.33
Explosions of powder and dynamite, .....	2												2	6.67
Premature blasts, .....	1	2									1	1	3	23.33
Falling into slopes, etc., .....	1						1					1	3	10.00
Miscellaneous, .....			1								1		2	6.67
Totals, .....	5	3	3		4	1	3	3	1	1	4	2	30	100.00
Causes of Accidents Outside														
Cars, .....		1									1		2	18.18
Machinery, .....		1							1				2	18.18
Suffocation in chutes, etc., .....										1			1	9.09
Miscellaneous, .....			1				1		1	1		2	6	54.55
Totals, .....	1	1	1				1		2	1	2	2	11	100.00
Grand totals inside and outside, .....	6	4	4		4	1	4	3	3	2	6	4	41	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, .....	2	2	1				2						6	6.32
Falls of slate, .....	2	2	1			5	3	3		1	2	2	21	22.11
Falls of roof, .....							1						2	2.11
Mine cars, .....	1	1	4			2	1	2			1	1	13	13.67
Explosions of gas and dust, .....	1	1	3		1	2		1					16	16.85
Explosions of powder and dynamite, .....	6	1	2					1				2	12	12.63
Premature blasts, .....	1	2				3	1		1			4	12	12.63
Falling into shafts, .....			1										1	1.05
Falling into slopes, etc., .....											1	1	2	2.11
Crushed at batteries, .....			1										1	1.05
Miscellaneous, .....	1				2		1	1	1	2		1	9	9.47
Totals, .....	14	8	13		3	13	9	14	2	3	5	11	95	100.00
Causes of Accidents Outside														
Cars, .....		1			1	1	1		2		1	1	8	32.00
Machinery, .....	2		1					1		2			6	24.00
Miscellaneous, .....	2				1		3		2		1	2	11	44.00
Totals, .....	4	1	1		2	1	4	1	4	2	2	3	25	100.00
Grand totals inside and outside, .....	18	9	14		5	14	13	15	6	5	7	14	120	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	4	2	2	...	1	1	1	1	1	1	3	2	19
Miners' laborers, .....	1	1	1	...	1	...	2	2	...	...	...	...	8
Drivers and runners, .....	1	...	...	...	1	1	...	...	...	...	2	...	3
Pumpmen, .....	...	...	...	...	...	...	...	...	...	...	1	...	1
Totals, .....	5	3	3	...	4	1	3	3	1	1	4	2	30
Outside													
Foremen, .....	...	...	...	...	...	...	1	...	...	...	1	...	2
Blacksmiths and carpenters, .....	...	...	...	...	...	...	...	...	2	1	...	...	1
All other employees, .....	1	1	1	...	...	...	...	...	...	2	1	...	8
Totals, .....	1	1	1	...	...	...	1	...	2	1	2	2	11
Grand totals inside and outside,.....	6	4	4	...	4	1	4	3	3	2	6	4	41

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant mine foremen, .....	11	4	9	...	3	2	4	7	1	...	3	8	58
Miners, .....	2	3	4	...	...	4	3	5	1	1	1	1	25
Miners' laborers, .....	1	...	...	...	...	...	...	...	...	1	...	...	3
Drivers and runners, .....	...	...	...	...	...	1	2	2	...	1	...	...	7
Pumpmen, .....	...	...	...	...	...	...	...	...	...	...	1	1	2
All other employees, .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals, .....	14	8	13	...	3	13	9	14	2	3	5	11	95
Outside													
Blacksmiths and carpenters, .....	...	...	...	...	...	...	...	1	...	...	...	...	1
Slatepickers (boys), .....	...	...	...	...	...	...	...	2	...	...	...	...	2
All other employees, .....	4	1	1	...	2	1	4	1	1	2	2	2	23
Totals, .....	4	1	1	...	2	1	4	1	4	2	2	3	25
Grand totals inside and outside,....	18	9	14	...	5	14	13	15	6	5	7	14	120

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....					2	1	1	...	1	1	1	...	7
Irish, .....	1										2		3
German, .....		1	1										2
Polish, .....	2	1					2	2				2	9
Hungarian, .....	1	1	2		1		1	1	1		2		11
Italian, .....									1			1	2
Slavonian, .....	1												1
Lithuanian, .....										1			1
Austrian, .....										1			1
Russian, .....					1								1
Tyrolean, .....	1												1
Servian, .....		1											1
Totals, .....	6	4	4	...	4	1	4	3	3	2	6	4	41

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	6	3	1	...	2	3	2	3	2	2	4	4	33
English, .....							1	1	1				3
Irish, .....					1							1	2
German, .....			1							1		1	3
Polish, .....	2	1	4			4	2	2	1		1	3	13
Hungarian, .....	2	1	2		1	3	2	5	2	2	1		20
Italian, .....	2		2		1	1	3	1	1			2	14
Slavonian, .....	3	3	1			1		4	1			1	14
Lithuanian, .....	1		1			1							2
Austrian, .....			1			1	1	1			1		5
Russian, .....		1										2	4
Tyrolean, .....	1												1
Totals, .....	18	9	14	...	5	14	13	15	6	5	7	14	120





Stockton	Slope	Non-gas.	Natural.	20	6	60	Steam	Guibal	53,500	61	302			
Beaver Meadow No. 2.	Slope	Non-gas.	Fan.	20	5.6	60	Steam	Guibal	18,400	8	1,691			
Beaver Meadow No. 4.	Slope	Non-gas.	Fan.	12	5	65	Steam	Guibal	13,580	62	576			
Tombaker	Drift.	Non-gas.	Furnace	14	16.35	8.815	14	Guibal	35,660	30	293			
Dorning	Drift.	Non-gas.	Fan.	20	5.6	90	Steam	Guibal	16,387	30	431			
Gowan Nos. 1 and 3.	Tunnel	Gaseous.	Fan.	18	5	100	Steam	Guibal	62,500	70,700	94	215		
Gowan No. 4.	Slope	Gaseous.	Fan.	20	6.1	95	Steam	Guibal	66,675	24,250	65,676	54	853	
G. B. Markle and Co.														
Jeddo No. 4.	Slope	Gaseous.	Fan.	24	7.1	84	2	Guibal	71,070	73,811	318	223		
Eldervale No. 1.	Slope	Non-gas.	Fan.	16	4.5	75	5	Guibal	51,000	49,000	129	326		
Highland No. 5.	Slope	Gaseous.	Fan.	16	4.5	70	1.2	Guibal	108,389	56,300	116,270	238	218	
Highland No. 2.	Slope	Gaseous.	Fan.	16	4.5	70	5	Guibal	62,400	50,300	204	241		
Highland No. 6.	Slope	Non-gas.	Fan.	10	3	80	5	Guibal	16,630	8,100	19,200	26	316	
Lehigh Valley Coal Co.														
Hazleton No. 1.	Slope	Gaseous.	Fan.	20	6	60		Guibal	101,455	38,470	108,150	128	309	
Hazleton No. 8.	Slope	Gaseous.	Fan.	16	4	6	80	Guibal	7	101,265	41,480	103,565	109	380
Hazleton No. 3.	Slope	Non-gas.	Fan.	16	4	5		Guibal	37,250	23,000	38,700	88	375	
Hazleton No. 5.	Slope	Gaseous.	Fan.	14	4.9	4	60	Guibal	51,700	42,200	57,900	175	240	
Hazleton Shaft.	Shaft	Gaseous.	Fan.	20	7	60		Guibal	112,600	86,800	135,600	230	377	
Spring Brook No. 1.	Slope	Gaseous.	Fan.	16	3.6	4	55	Guibal	40,000	17,500	32,000	81	216	
Spring Brook No. 2.	Slope	Gaseous.	Fan.	14	4.9	4	60	Guibal	22,560	20,700	35,500	68	304	
Pardee Brothers and Co.														
Lattimer No. 1.	Slope	Gaseous.	Fan.	16	4.6	4.3	66	1.3	Guibal	61,800	48,000	72,600	97	494
Lattimer No. 2.	Slope	Gaseous.	Fan.	16	4.6	4.3	66	1.3	Guibal	57,975	35,000	100,200	86	407
Lattimer No. 12.	Slope	Non-gas.	Natural.	16	4.6	4.3	66	1.3	Guibal	35,000	28,000	64,000		
Lattimer No. 3.	Slope	Non-gas.	Natural.											
Lattimer No. 4.	Slope	Non-gas.	Natural.											
Lattimer No. 5.	Slope	Non-gas.	Natural.											
Lattimer No. 6.	Slope	Non-gas.	Natural.											
Lattimer No. 7.	Slope	Non-gas.	Natural.											
Lattimer No. 8.	Slope	Non-gas.	Natural.											
Lattimer No. 11.	Slope	Non-gas.	Natural.											
Lattimer No. 12.	Slope	Non-gas.	Natural.											
A. Pardee and Co.														
Craberry No. 1, North.	Slope	Non-gas.	Fan.	16	4	70	9	Guibal	100,310	85,000	102,500	139	611	
Craberry No. 1, South.	Slope	Non-gas.	Fan.	16	4.1	50	9	Guibal	85,200	70,000	87,000	130	538	
Craberry No. 4.	Slope	Non-gas.	Fan.	16	4.9	4	60	7	Guibal	45,000	45,000	64,000	110	409
Craberry No. 5.	Slope	Non-gas.	Fan.	16	4.5	4	80	4	Guibal	5,000	5,000	26,000	90	244
Craberry No. 6.	Slope	Non-gas.	Fan.	16	4.6	4	60	8	Guibal	24,000	22,000	40,000	40	375
Craberry No. 7.	Slope	Non-gas.	Fan.	16	4.6	4	60	8	Guibal	21,000	15,000	22,000	40	375
Craberry No. 8.	Slope	Non-gas.	Fan.	16	4.6	4	60	8	Guibal	36,400	25,000	37,000	52	481
Estate A. S. Van Winkle														
Coleraine Brook Mountain.	Slope	Gaseous.	Fan.	16	4	85		Guibal	35,750	34,150	40,100	124	275	
Coleraine No. 2, New.	Slope	Non-gas.	Natural.											
Coleraine No. 2, Old.	Slope	Non-gas.	Natural.											

\*Robbing; no measurements taken.

TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Coleraine No. 1, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coleraine No. 8, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coleraine No. 9, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coleraine Stripping, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calvin Pardee and Co.																	
Harwood No. 2, .....	Slope.....	Non-gas.	Natural.	16	4.6	4.3	72	.2	Gulbal...	Steam...	.....	*	45,500	32,500	50,500	116	289
Harwood No. 4, .....	Slope.....	Gaseous.	Fan.....	16	4.6	4.3	72	.1	Gulbal...	Steam...	.....	6	47,200	37,500	53,700	144	269
Harwood No. 5, .....	Slope.....	Non-gas.	Fan.....	16	4.6	4.3	72	.2	Gulbal...	Steam...	.....	3	.....	.....	.....	.....	.....
Harwood No. 19, .....	Slope.....	Non-gas.	Fan.....	16	4.6	4.3	72	.2	Gulbal...	Steam...	.....	*	.....	.....	.....	.....	.....
Harwood No. 21, .....	Slope.....	Non-gas.	Fan.....	16	4.6	4.3	72	.2	Gulbal...	Steam...	.....	*	.....	.....	.....	.....	.....
Harwood No. 10, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Harwood Wharton Stripping, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Harwood Mammoth Stripping, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Upper Lehigh Coal Co.																	
Slope No. 1, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Slope No. 2, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Slope No. 3, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Slope No. 4, Little, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Slope No. 5, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Slope No. 6, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Slope No. 7, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Slope No. 8, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Shaft No. 2, .....	Shaft.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....
Stripping No. 1, .....	Slope.....	Non-gas.	Natural.	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....

\*Robbing; no measurements taken.

C. M. Dodson and Co.									
Beaver Brook No. 6.	Slope.....	Non-gas.	Natural.	16	4.6	5	70	Guibal...	43,000
Beaver Brook No. 10.	Slope.....	Gaseous.	Fan.....	16	4.6	5	80	Guibal...	38,000
Beaver Brook No. 11.	Slope.....	Gaseous.	Fan.....	16	4.6	5	80	Guibal...	35,000
Beaver Brook No. 12.	Slope.....	Non-gas.	Fan.....	16	4.6	5	80	Guibal...	18,000
Beaver Brook No. 15.	Slope.....	Gaseous.	Fan.....	16	4.6	5	80	Guibal...	12,000
John S. Wentz and Co.									
Hazle Brook No. 3.	Slope.....	Gaseous.	Natural.	16	4.6	5	80	Guibal...	10,000
Hazle Brook No. 6.	Slope.....	Non-gas.	Natural.	16	4.6	5	80	Guibal...	20,000
Hazle Brook No. 7.	Slope.....	Non-gas.	Natural.	16	4.6	5	80	Guibal...	35,000
Hazle Brook No. 7.	Slope.....	Non-gas.	Natural.	16	4.6	5	80	Guibal...	12,000
Hazle Mountain Coal Co.									
Slope No. 1.	Slope.....	Non-gas.	Fan.....	16	6	5	60	Guibal...	71,950
Slope No. 4.	Slope.....	Non-gas.	Exhaust steam.	16	6	5	60	Guibal...	33,450
M. S. Kemmerer and Co.									
Sandy Run No. 1.	Slope.....	Non-gas.	Natural.	16	6	5	60	Guibal...	10,200
Sandy Run No. 2.	Slope.....	Non-gas.	Natural.	16	6	5	60	Guibal...	10,200
Sandy Run No. 3.	Slope.....	Non-gas.	Natural.	16	6	5	60	Guibal...	10,200
Sandy Run No. 4.	Slope.....	Non-gas.	Natural.	16	6	5	60	Guibal...	10,200
Sandy Run No. 5.	Slope.....	Non-gas.	Natural.	16	6	5	60	Guibal...	10,200
Pond Creek Coal Co.									
Pond Creek No. 1.	Slope.....	Non-gas.	Natural.	16	6	5	60	Guibal...	10,200
Pond Creek No. 2.	Slope.....	Non-gas.	Natural.	16	6	5	60	Guibal...	10,200
Pond Creek No. 7.	Slope.....	Non-gas.	Natural.	16	6	5	60	Guibal...	10,200
Black Creek Coal Co.									
Harleigh.	Slope.....	Non-gas.	Fan.....	4	2.6	1.3	275	Dempfels	12,000
Hacklebernie Coal Co.	Tunnel...	Non-gas.	Natural.	4	2.6	1.3	275	Dempfels	12,000
Hacklebernie.	Tunnel...	Non-gas.	Natural.	4	2.6	1.3	275	Dempfels	12,000
Stauffer and Rowe									
Rowe.	Slope.....	Non-gas.	Natural.	4	2.6	1.3	275	Dempfels	12,000
Thomas R. Reese and Son									
Dusky Diamond.	Slope.....	Non-gas.	Natural.	4	2.6	1.3	275	Dempfels	12,000

\*Robbing; no measurements taken.

†New slope.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Coal and Navigation Co. Colliery No. 1, ..... Colliery No. 4, ..... Colliery No. 5, ..... Colliery No. 6, ..... Colliery No. 9, ..... Screen building, .....	Carbon,....	Baird Snyder, Jr.,	Lansford, .....	W. G. Whilden, ..	Lansford, .....	C. R. R. of N. J.
Coxe Brothers and Co., Inc. Driftton Nos. 1 and 2, ..... Eckley and Buck Mountain, ..... Stockton, ..... Beaver Meadow, ..... Tomhicken, Derringer and Gowan, ...	Luzerne, } Luzerne, } Luzerne, } Carbon, } Luzerne, }	S. D. Warriner, ..	Wilkes-Barre, .....	W. H. Davies, ....	Driftton, .....	L. V.
G. B. Markle and Co. Jeddo No. 4 and Ebervale, ..... Highland No. 5, ..... Highland Nos. 1-2-6, .....	Luzerne....	W. H. Smith, Jr.,	Jeddo, .....	J. T. Kelth, .....	Jeddo, .....	L. V.
Lehigh Valley Coal Co. Hazleton No. 1, ..... Hazleton shaft, ..... Spring Brook, .....	Luzerne, } Luzerne, } Carbon, }	S. D. Warriner, ..	Wilkes-Barre, .....	Thomas Thomas, ..	Hazleton, .....	L. V.
Pardee Brothers and Co. Lattimer Nos. 3 and 4, .....	Luzerne....	A. W. Drake, .....	Lattimer Mines, ..	Calvin Pardee, Jr.,	Lattimer Mines,	L. V.
Craberry, ..... East Crystal Ridge, .....	Luzerne....	Frank Pardee, ....	Hazleton, .....	.....	.....	L. V.
Coleraine, ..... Estate A. S. Van Winkle	Carbon,....	John Harvey, .....	Hazleton, .....	.....	.....	L. V. and C. R. R. of N. J.
Harwood, ..... Calvin Pardee and Co.	Luzerne,....	A. W. Drake, .....	Lattimer Mines, ..	Calvin Pardee, Jr.,	Lattimer Mines,	L. V.
Upper Lehigh Coal Co. Upper Lehigh, .....	Luzerne,....	A. C. Leisenring, ...	Upper Lehigh, ....	.....	.....	C. R. R. of N. J.
C. M. Dodson and Co. Beaver Brook, .....	Luzerne,....	E. L. Bullock, .....	Audenried, .....	R. G. Russel, ....	Audenried, ....	L. V. and C. R. R. of N. J.

J. S. Wentz and Co.	Luzerne....	Jno. L. Wentz, ...	1735 Land Bldg., Phila.	Jno. Weber, .....	Hazle Brook, ...	L. V.
Hazle Brook, .....						
Hazle Mountain Coal Co.	Luzerne....	W. R. McTurk, ..	Penn'a Bldg., Phila.	W. A. Fuller, .....	Hazleton, .....	L. V.
Hazle Mountain, .....						
M. S. Kemmerer and Co.	Luzerne....	M. S. Kemmerer, .	Upper Lehigh, ....	George D. Kugler, ..	Sandy Run, ...	C. R. R. of N. J.
Sandy Run, .....						
Pond Creek Coal Co.	Luzerne....	W. G. Thomas, ...	Hazleton, .....	I. D. Thomas, ....	Zehner, .....	L. V. and C. R. R. of N. J.
Pond Creek, .....						
Black Creek Coal Co.	Luzerne....	W. G. Thomas, ...	Hazleton, .....			L. V.
Harleigh, .....						
Hacklebernie Coal Co.	Carbon,....	D. S. Pursell, ....	Mauch Chunk, ...			C. R. R. of N. J.
Hacklebernie, .....						
Rowe, .....	Luzerne....	James Rowe, ....	Hazleton, .....			L. V.
Stauffer and Rowe						
Thomas R. Reese and Son	Luzerne....	Thomas R. Reese, ..	Audenried, .....			L. V. and C. R. R. of N. J.
Dusky Diamond, .....						





Lehigh Valley Coal Co.									
Hazleton No. 1, .....	178,087	28,684	51,879	288,650	204	733	3	6	6,762
Hazleton shaft, .....	306,246	52,625	.....	358,871	206	1,037	7	19	9,652
Spring Brook, .....	97,477	16,001	1,826	115,304	167	355	3	7	2,771
Totals, .....	581,810	107,310	33,705	742,825	.....	2,145	13	32	19,215
Pardee Brothers and Co.									
Lattimer Nos. 3 and 4, .....	429,036	51,600	6,641	487,277	221	1,188	1	10	5,575
Luzerne, .....									
A. Pardee and Co.									
Cranberry and East Crystal Ridge, .....	406,275	55,364	5,170	466,809	229	1,233	4	6	5,320
Luzerne, .....									
Estate A. S. Van Winkle									
Coleraine, .....	222,362	42,425	2,771	267,558	245	664	.....	7	2,300
Carbon, .....									
Calvin Pardee and Co.									
Harwood, .....	227,136	36,500	1,766	265,402	217	728	1	10	3,975
Luzerne, .....									
Upper Lehigh Coal Co.									
Upper Lehigh, .....	178,588	40,379	6,373	225,340	204	615	2	2	3,252
Luzerne, .....									
C. M. Dodson and Co.									
Beaver Brook, .....	142,432	25,126	1,001	168,559	188	488	.....	1	4,566
Luzerne, .....									
John S. Wentz and Co.									
Hazle Brook, .....	116,610	16,100	940	133,650	187	370	2	1	1,470
Luzerne, .....									
Hazle Mountain Coal Co.									
Hazle Mountain, .....	97,542	8,000	905	106,537	202	296	.....	9	1,200
Luzerne, .....									
M. S. Kemmerer and Co.									
Sandy Run, .....	43,455	7,650	1,743	52,849	206	189	1	1	1,173
Luzerne, .....									
Pond Creek Coal Co.									
Pond Creek, .....	20,000	5,500	195	25,695	124	145	.....	.....	100
Luzerne, .....									
Black Creek Coal Co.									
Harleigh, .....	8,337	3,954	854	13,175	95	147	.....	.....	63
Luzerne, .....									
Hacklebernie Coal Co.									
Hacklebernie, .....	6,224	250	5,775	12,249	275	26	.....	.....	.....
Carbon, .....									
Stauffer and Rowe									
Rowe, .....	5,292	240	1,510	6,952	255	36	.....	.....	270
Luzerne, .....									
Thomas R. Reese and Son									
Dusky Diamond, .....	412	450	3,762	4,624	247	9	.....	.....	80
Luzerne, .....									
Grand totals, .....	5,234,548	759,410	145,993	6,139,451	.....	14,677	41	120	73,832
								1,709,409	
								1,704	

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market		Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh Coal and Navigation Co.,	Carbon	1,189,356	123,329	35,735	1,318,430	.....	3,005	5	10	1,660	347,900	342	
Coke Brothers and Co., Incorporated,	Luzerne	819,335	125,874	10,609	956,418	.....	1,798	7	18	15,336	122,758	199	
G. B. Markle and Co.,	Luzerne	759,825	109,319	6,418	875,662	.....	1,575	13	32	8,277	232,454	256	
Lehigh Valley Coal Co.,	Luzerne	581,810	107,310	53,705	742,825	.....	2,145	13	32	19,215	185,443	169	
Pardee Brothers and Co.,	Luzerne	429,436	51,600	6,641	487,377	.....	1,188	1	10	5,575	219,525	116	
A. Pardee and Co.,	Luzerne	406,275	55,344	5,170	466,809	.....	1,253	4	6	5,320	223,175	200	
Estate A. S. Van Winkle,	Carbon	229,362	42,435	2,771	297,558	.....	664	.....	7	2,300	69,350	85	
Calvin Pardee and Co.,	Luzerne	227,136	26,500	1,766	295,402	.....	728	1	10	3,975	93,375	74	
Upper Lehigh Coal Co.,	Luzerne	178,538	40,379	6,373	225,340	.....	615	2	2	3,252	45,038	77	
J. M. Dodson and Co.,	Luzerne	142,432	25,126	1,601	168,559	.....	488	.....	1	4,566	17,225	57	
John S. Wentz and Co.,	Luzerne	116,610	16,100	995	133,650	.....	370	2	1	1,470	18,725	33	
Hazle Mountain Coal Co.,	Luzerne	97,542	8,000	.....	106,537	.....	296	.....	9	1,279	49,200	34	
Miscellaneous companies,	Luzerne	83,631	18,074	13,839	115,544	.....	552	1	1	1,686	75,401	56	
Totals,		5,234,548	759,410	145,962	6,139,951	.....	14,677	41	120	73,832	1,769,409	1,764	

\*Carbon.

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers			Locomotives			Total horse power	Horse power	Total horse power	Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Tubular	Horse power	Steam	Air	Electric										
Lehigh Coal and Navigation Co.	Carbon	40	568	14,188	50	14,188	14,756	23	11	14,756	113	4,873	8	10,415	7,450	1	4
Coxe Brothers and Co., Inc.	Luzerne	15	536	11,875	62	11,875	12,125	22	22	12,125	88	7,260	20	18,560	11,550	1	1
G. B. Markle and Co., Inc.	Luzerne	46	1,380	8,916	56	8,916	8,916	12	1	8,916	104	7,792	10	10,221	10,021	1	6
Lehigh Valley Coal Co.	Luzerne	12	240	6,310	42	6,310	7,750	12	4	7,750	68	6,415	14	12,860	6,800	1	1
Pardee Brothers and Co.	Luzerne	31	579	2,455	10	2,455	2,685	11	11	2,685	67	3,335	15	23,100	7,600	1	1
A. Pardee and Co.	Carbon	23	2,190	2,190	1	2,190	2,190	1	1	2,190	36	1,310	15	7,347	7,347	1	1
Estate A. S. Van Winkle	Luzerne	12	1,800	1,800	1	1,800	1,000	1	1	1,000	36	1,310	15	7,347	7,347	1	1
Calvin Pardee and Co.	Luzerne	14	2,285	2,285	13	2,285	3,995	1	1	3,995	29	1,227	8	8,600	4,000	1	1
Upper Lehigh Coal Co.	Luzerne	14	1,800	1,800	13	1,800	2,250	1	1	2,250	46	1,044	11	12,000	4,900	1	1
C. M. Dodson and Co.	Luzerne	10	1,400	1,400	10	1,400	1,400	1	1	1,400	19	1,010	9	13,000	6,000	1	1
John S. Wentz and Co.	Luzerne	8	1,100	1,100	4	1,100	1,100	1	1	1,100	14	416	4	4,500	3,000	1	1
Hazle Mountain Coal Co.	Luzerne	216	200	200	12	200	440	1	1	440	10	385	3	3,880	1,500	1	1
M. S. Kemmerer and Co.	Luzerne	6	240	240	300	300	300	1	1	300	6	185	1	3,000	1,000	1	1
Pond Creek Coal Co.	Luzerne	6	600	600	300	300	600	1	1	600	3	150	3	1,700	750	1	1
Black Creek Coal Co.	Luzerne	1	100	100	6	100	100	1	1	100	3	45	1	1,363	897	1	1
Backleburne Coal Co.	Carbon	2	60	60	1	60	60	1	1	60	1	45	1	1,363	897	1	1
Stauffer and Rowe	Luzerne	1	90	90	1	90	90	1	1	90	1	60	1	1,363	897	1	1
Thomas R. Reese and Son	Luzerne	1	90	90	1	90	90	1	1	90	1	60	1	1,363	897	1	1
Totals		294	5,878	60,473	346	60,473	66,351	124	13	66,351	617	54,535	117	138,286	67,932	12	26

\*Carbon.

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Col- lieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh Coal and Navigation Co. Colliery No. 1, ..... Colliery No. 4, ..... Colliery No. 5, ..... Colliery No. 6, ..... Colliery No. 9, ..... Screen Building, .....	Carbon,.....	3	3	7	171	98	50	5	4	15	194	550	...	1	10	11	30	20	2	138	212	762
		2	1	4	35	12	24	10	8	81	135	312	...	1	5	9	24	38	1	88	166	478
		2	1	4	42	27	19	9	...	52	86	241	...	...	...	...	...	...	...	...	...	241
		2	2	5	125	92	33	17	...	82	178	536	...	1	11	24	47	36	1	180	900	836
		2	1	3	103	10	13	4	2	42	89	269	...	...	3	17	13	16	1	92	142	411
		2	1	...	...	...	...	...	...	...	...	...	...	1	3	17	96	2	...	158	277	277
Totals, .....		10	8	23	476	239	139	45	14	272	682	1,908	...	5	36	74	213	108	5	656	1,097	3,005
Coxe Brothers and Co., Inc. Drifton Nos. 1 and 2, ..... Eckley and Buck Mountain, ..... Stockton, ..... Beaver Meadow, ..... Tomhicken, Derringer and Gowan, .....	Luzerne, .... Luzerne, .... Luzerne, .... Carbon,..... Luzerne, .....	2	4	2	176	15	35	4	6	6	119	369	1	1	15	37	19	22	6	99	200	569
		1	5	...	44	9	18	...	1	4	52	134	...	2	11	20	11	19	4	57	123	257
		2	5	...	117	14	20	1	1	4	59	223	...	...	17	24	15	36	5	97	196	419
		2	3	4	204	27	33	5	12	7	87	384	...	2	17	33	8	22	6	81	169	553
		7	17	6	541	65	106	10	20	21	317	1,110	1	6	60	114	53	99	21	334	683	1,798
Totals, .....		7	17	6	541	65	106	10	20	21	317	1,110	1	6	60	114	53	99	21	334	683	1,798
G. B. Markle and Co. Jeddo No. 4 and Ebersvale, ..... Highland No. 5, ..... Highland Nos. 1, 2 and 6, .....	Luzerne, ...	2	5	...	217	120	34	6	1	32	107	524	1	1	16	25	21	16	2	92	174	698
		1	3	2	127	112	28	7	1	21	45	347	1	1	11	18	16	7	2	71	127	474
		2	2	...	87	100	20	5	9	15	36	276	1	1	11	22	12	13	2	65	127	403
		5	10	2	431	332	82	18	11	68	188	1,147	3	3	38	65	49	36	6	228	428	1,575
Totals, .....		5	10	2	431	332	82	18	11	68	188	1,147	3	3	38	65	49	36	6	228	428	1,575





TABLE 3.—Recapitulation

Names of Operators	County	Inside										Outside							Grand total inside and outside			
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Boorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)		Bookkeepers and clerks	All other employees	Total outside
Lehigh Coal and Navigation Co.,	Carbon.....	10	8	23	476	229	139	45	14	272	682	1,908	....	9	36	74	212	108	5	656	1,097	3,006
Coke Brothers and Co., Inc.,	Luzerne.....	7	17	6	541	265	106	10	20	21	317	1,110	1	9	60	114	53	39	1	334	688	1,798
G. B. Markie and Co.,	Luzerne.....	5	10	2	431	232	82	18	11	68	188	1,147	3	3	38	65	49	36	1	228	428	1,575
Lehigh Valley Coal Co.,	Luzerne, *	8	14	14	640	327	69	14	22	....	283	1,507	....	3	38	72	126	17	8	373	638	2,146
Pardee Brothers and Co.,	Luzerne.....	2	10	1	300	122	52	10	....	70	140	767	1	4	22	42	69	27	8	308	481	1,183
A. Pardee and Co.,	Luzerne.....	4	4	6	370	270	78	38	13	35	64	882	....	2	38	50	38	12	4	206	371	1,253
Estate A. S. Van Winkle,	Carbon.....	4	1	3	159	145	34	1	6	36	1	390	1	2	16	40	42	12	8	153	274	664
Calvin Pardee and Co.,	Luzerne.....	1	5	1	164	127	34	....	9	33	39	413	1	1	8	29	19	26	3	248	315	728
Upper Lehigh Coal Co.,	Luzerne.....	2	5	1	127	121	24	8	5	12	11	325	1	4	14	45	22	33	3	74	168	488
C. M. Dodson and Co.,	Luzerne.....	1	2	1	106	116	35	8	6	16	17	300	1	1	9	22	23	16	1	105	178	370
John S. Wentz and Co.,	Luzerne.....	1	2	....	76	28	21	....	6	60	....	192	1	1	8	14	20	5	3	66	129	296
Hazle Mountain Coal Co.,	Luzerne.....	2	1	....	90	45	12	2	3	10	2	167	1	1	8	14	20	5	3	90	229	562
Miscellaneous companies,	Luzerne.....	6	1	....	132	90	29	4	5	52	4	323	4	1	15	25	54	42	4	80	229	562
Totals,	.....	52	67	57	3,612	2,055	715	158	122	658	1,848	9,371	15	39	324	617	821	489	80	2,921	5,306	14,677

\*Carbon.

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total	
		January	February	March	April	May	June	July	August	September	October	November	December		
Lehigh Coal and Navigation Co. Colliery No. 1, ..... Colliery No. 4, ..... Colliery No. 5, ..... Colliery No. 6, ..... Colliery No. 9, ..... Screen Building, .....	Carbon,.....	23 22 22 22 22 29	21 21 16 19 20 25	24 24 22 23 24 29	..... ..... ..... ..... ..... .....	16 16 21 16 15 21	23 23 23 20 23 32	23 23 23 21 23 30	23 23 24 23 23 29	21 20 21 20 22 29	23 23 23 22 23 32	23 21 18 22 22 31	23 18 22 22 22 31	244 236 236 231 241 218	
Coxe Brothers and Co., Inc. Drifton Nos. 1 and 2, ..... Eckley and Buck Mountain, ..... Stockton, ..... Beaver Meadow, ..... Tomhicken, Derringer and Gowen, .....	Luzerne,..... Luzerne,..... Luzerne,..... Carbon,..... Luzerne,.....	19 15 29 29 29	20 17 19 19 19	24 20 24 24 24	..... ..... ..... ..... .....	12 10 11 10 10	23 20 23 22 22	21 20 21 22 22	22 20 24 23 23	20 18 20 22 20	20 17 22 19 22	21 18 21 22 22	18 16 21 22 20	20 16 20 20 20	220 191 225 221 221
G. B. Markle and Co. Jeddo No. 4 and Eberval, ..... Highland No. 5, ..... Highland Nos. 1, 2 and 6, .....	Luzerne,..... Luzerne,..... Luzerne,.....	16 16 18	13 13 15	14 15 16	..... ..... .....	7 9 8	14 15 15	12 14 15	13 14 17	11 11 13	13 14 17	12 14 17	12 12 16	12 145 167	
Lehigh Valley Coal Co. Hazleton No. 1, ..... Hazleton Shaft, ..... Spring Brook, .....	Luzerne,..... Luzerne,..... Carbon,.....	19 18 17	14 15 17	23 19 21	..... 7 .....	11 18 8	22 21 16	20 18 18	19 17 17	20 19 9	20 18 16	17 17 15	19 18 15	204 206 167	
Pardee Brothers and Co. Lattimer Nos. 3 and 4, .....	Luzerne,.....	21	20	22	.....	11	21	20	23	21	21	20	21	221	
A. Pardee and Co. Cranberry and East Crystal Ridge, .....	Luzerne,.....	21	19	25	.....	14	23	23	20	23	22	19	20	229	
Estate A. S. Van Winkle Coderaine, .....	Carbon,.....	22	22	21	.....	16	23	23	24	22	25	22	23	245	

TABLE 3.—PART 2—Continued

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Harwood, Calvin Pardee and Co.	Luzerne, ....	20	20	23	.....	10	18	22	21	21	22	21	19	217
Upper Lehigh, Upper Lehigh Coal Co.	Luzerne, ....	20	18	20	.....	10	20	20	15	18	21	21	21	204
Beaver Brook, C. M. Dodson and Co.	Luzerne, ....	18	16	20	.....	8	19	16	19	18	20	16	18	188
Hazle Brook, John S. Wentz and Co.	Luzerne, ....	20	17	20	.....	10	17	16	19	16	18	17	17	187
Hazle Mountain, Hazle Mountain Coal Co.	Luzerne, ....	21	18	21	.....	12	15	19	19	20	20	19	18	202
Sandy Run, M. S. Kemmerer and Co.	Luzerne, ....	23	20	16	.....	9	20	21	12	18	23	22	22	206
Pond Creek, Pond Creek Coal Co.	Luzerne, ....	22	18	17	.....	9	9	.....	.....	.....	16	16	17	124
Harleigh, Black Creek Coal Co.	Luzerne, ....	27	24	26	.....	18	.....	.....	.....	.....	.....	.....	.....	95
Hacklebarne, Hacklebarne Coal Co.	Carbon, .....	24	24	25	23	13	21	25	24	24	25	24	23	275
Rowe, Stauffer and Rowe	Luzerne, ....	25	23	24	.....	23	21	21	24	25	25	25	21	256
Dusky Diamond, Thomas R. Reese and Son	Luzerne, ....	25	22	23	25	.....	.....	26	27	20	27	26	26	247

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 4	Steve Mastley, .....	Tyrolean, ..	Miner, .....	45	M. 1	4	4	Hazleton Shaft, ..	Luzerne, ....	Fatally burned by an explosion of powder.
4	Andrew Jundack, .....	Slavonian, ..	Miner, .....	42	M. 1	5	5	Hazleton Shaft, ..	Luzerne, ....	Fatally burned by an explosion of powder.
8	Edward Malloy, .....	Irish, .....	Miner, .....	46	S. ....	.....	.....	Spring Brook, ....	Carbon, .....	Fatally injured by falling down breast way.
24	Albert Surma, .....	Polish, .....	Roll tender, ..	20	S. ....	.....	.....	Lansford No. 4, ..	Carbon, .....	Fatally injured by machinery on breaker.
24	John Smith, .....	Polish, .....	Miner, .....	31	S. ....	.....	.....	Lattimer, .....	Luzerne, ....	Fatally injured by flying coal from shot.
29	John Harbushack, .....	Hungarian, ..	Driver, .....	17	S. ....	.....	.....	Ebervale, .....	Luzerne, ....	Fatally injured by falling under loaded car.
Feb 3	John Franko, .....	Hungarian, ..	Driver, .....	28	M. 1	1	1	Beaver Meadow, ..	Carbon, .....	Fatally injured by falling under cars.
15	Elias Bukblitz, .....	Servian, ....	Laborer, .....	24	M. 1	1	1	Harwood, .....	Luzerne, ....	Fatally injured by flying coal from shot.
24	William Birch, .....	Polish, .....	Miner, .....	35	M. 1	2	2	Jeddo No. 4, .....	Luzerne, ....	Instantly killed by explosion of powder while tamping hole.
26	John Ebling, .....	German, .....	Miner, .....	65	M. 1	.....	.....	Eckley, .....	Luzerne, ....	Instantly killed by fall of coal.
March. 15	Fred Hoffmich, .....	German, .....	Miner, .....	50	M. 1	5	5	Cranberry, .....	Luzerne, ....	Instantly killed by explosion of dynamite while tamping hole.
21	Michael Pavlick, .....	Hungarian, ..	Miner, .....	39	M. 1	4	4	Spring Brook, ....	Carbon, .....	Fatally injured by flying coal from shot.
22	George Tokay, .....	Hungarian, ..	Laborer, .....	26	M. 1	.....	.....	Lansford No. 6, ..	Carbon, .....	Instantly killed by falling from breaker.
30	John Chigo, .....	Hungarian, ..	Laborer, .....	35	M. 1	2	2	Highland No. 5, ..	Luzerne, ....	Fatally injured by prop striking him.
16	Jacob Estranski, .....	Russian, .....	Laborer, .....	21	S. ....	.....	.....	Cranberry, .....	Luzerne, ....	Instantly killed by fall of coal.
23	Andrew Craven, .....	American, ..	Driver, .....	23	M. 1	.....	.....	Hazleton Shaft, ..	Luzerne, ....	Fatally injured. Squeezed between car and door frame.
23	Wasil Molnock, .....	Hungarian, ..	Laborer, .....	23	S. ....	.....	.....	Jeddo No. 4, .....	Luzerne, ....	Suffocated by rush of coal in small gangway.
31	Peter Markey, .....	American, ..	Miner, .....	33	M. 1	3	3	Lansford No. 5, ..	Carbon, .....	Fatally injured. Struck by coal in breast way.
June 11	Owen Collins, .....	American, ..	Miner, .....	31	S. ....	.....	.....	Nesquehoning No. 1,	Carbon, .....	Fatally burned by explosion of gas.
July 14	William Talkofski, .....	Polish, .....	Laborer, .....	26	S. ....	.....	.....	Highland No. 2,	Luzerne, ....	Instantly killed by fall of rock.
19	Clemer Mahollick, .....	Hungarian, ..	Laborer, .....	40	M. 1	.....	.....	Spring Brook, ....	Carbon, .....	Instantly killed by fall of dividing slate.



TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
July	27 John Dougherty, .....	American, ..	Stripping fore- man, .....	35	M. 1	5	5	Drifton No. 1, ....	Luzerne, ....	Fatally injured by explosion of dynamite.
	28 Joseph Chlebofski, .....	Polish, .....	Miner, .....	27	M. 1	1	1	Hazleton No. 1, ..	Luzerne, ....	Fatally injured by falling down breast manway.
Aug.	16 John Ducheck, .....	Polish, .....	Miner, .....	38	M. 1	3	3	Hazleton Shaft, ..	Luzerne, ....	Instantly killed by fall of coal.
	20 George Fetenko, .....	Hungarian, ..	Laborer, .....	26	M. 1	1	1	Upper Lehigh, ....	Luzerne, ....	Fatally injured by fall of slate.
	23 Clement Morniske, .....	Polish, .....	Laborer, .....	24	S. ....	....	....	Highland No. 2, ..	Luzerne, ....	Fatally injured between top of car and collar on slope.
Sept.	22 Lawrence Leitner, .....	American, ..	Roll tender, ..	17	S. ....	....	....	Hazleton No. 1, ..	Luzerne, ....	Fatally injured. Crushed in rolls. Out- side.
	26 Egnatz Veturiski, .....	Hungarian, ..	Laborer, .....	48	M. 1	1	1	Drifton No. 1, ....	Luzerne, ....	Fatally injured. Thrown over car when sides of car tilted. Outside.
Oct	26 Mike Oseft, .....	Italian, .....	Miner, .....	45	M. 1	1	1	Hazleton Shaft, ..	Luzerne, ....	Fatally injured by fall of coal.
	1 John Corra, .....	Austrian, .....	Miner, .....	29	M. 1	4	4	Hazleton Shaft, ..	Luzerne, ....	Fatally injured. Run over by car pushed by motor.
	26 William Sauers, .....	American, ..	Carpenter, ....	43	M. 1	3	3	Hazleton No. 1, ..	Luzerne, ....	Fatally injured by falling from breaker. Outside.
Nov	2 Peter Damon, .....	Hungarian, ..	Pumpman, ..	36	M. 1	1	1	Upper Lehigh, ....	Luzerne, ....	Fatally injured. Run over by car. Out- side.
	12 Benjamin Walker, .....	Irish, .....	Pumpman, ..	62	S. ....	....	....	Lansford No. 4, ....	Carbon, .....	Fatally injured. Struck by piece of board which fell down slope.
	13 Charles McGill, .....	Irish, .....	Miner, .....	43	M. 1	7	7	Highland No. 5, ..	Luzerne, ....	Instantly killed by fall of coal.
	14 Thomas Lewis, .....	American, ..	Miner, .....	28	M. 1	....	....	Sandy Run, .....	Luzerne, ....	Instantly killed by fall of coal.
	15 Stanley Matusefski, ..	Lithuanian, ..	Miner, .....	29	M. 1	2	2	Cranberry, .....	Luzerne, ....	Instantly killed by flying coal from shot.
	27 Andrew Halko, .....	Hungarian, ..	Laborer, .....	19	S. ....	....	....	Eckley and Buck Mountain,	Luzerne, ....	Suffocated in cave on stripping. Outside.
Dec	7 Toney Young, .....	Italian, .....	Asst. strip- ping fore man, .....	46	M. 1	7	7	Hazle Brook, .....	Luzerne, ....	Instantly killed by explosion of powder. Outside.
	7 George Chapura, .....	Slavonian, ..	Laborer, .....	22	M. 1	2	2	Hazle Brook, .....	Luzerne, ....	Instantly killed by explosion of powder. Outside.
	11 Casmer Brishinski, .....	Polish, .....	Miner, .....	45	M. 1	3	3	Cranberry, .....	Luzerne, ....	Instantly killed by flying coal from shot.
21	Alexander Kodaski, .....	Polish, .....	Miner, .....	28	M. 1	2	2	Hazleton Shaft, ..	Luzerne, ....	Fatally injured by falling down breast manway.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.								
4	Natal Yurich, .....	Tyroleran, ..	Miner, .....	24	M.			
4	John Krutkowski, .....	Polish, .....	Miner, .....	21	S.	Hazleton Shaft, .....	Luzerne, ..	Seriously burned by an explosion of powder.
4	Peter Strasiak, .....	Slavonian, ..	Miner, .....	24	M.			
4	Simon Strasiak, .....	Slavonian, ..	Miner, .....	22	S.			
4	Michael Cushmanek, .....	Slavonian, ..	Miner, .....	28	M.			
4	Paul Piro, .....	Italian, .....	Miner, .....	24	M.			
15	Moses Weodrung, .....	American, ..	Miner, .....	26	M.	Coleraine, .....	Carbon, .....	Contusion of ribs by falling against a plank.
15	Jacob Glaze, .....	American, ..	Driver, .....	21	M.	Harwood, .....	Luzerne, ..	Leg fractured. Squeezed between cuts on slope.
15	Carmello Bonafio, .....	Italian, .....	Laborer, .....	31	M.	Lattimer, .....	Luzerne, ..	Leg fractured. Struck by rock which rolled down chute. Outside.
16	Louis Abraham, .....	Italian, .....	Laborer, .....	21	S.	Hazle Mountain, ..	Luzerne, ..	Leg fractured by door falling upon him when chain broke. Outside.
18	R. F. Van Hargan, .....	American, ..	Laborer, .....	41	M.	Coleraine, .....	Carbon, .....	Arm fractured by machinery. Outside.
20	Michael Kestek, .....	Hungarian, ..	Miner, .....	26	M.	Highland No. 3, ..	Luzerne, ..	Contusions of back, and nose broken by fall of slate.
20	George Cruchock, .....	Hungarian, ..	Miner, .....	34	M.	Highland No. 3, ..	Luzerne, ..	Contusions of back by fall of slate.
21	John Pata, .....	American, ..	Machinist, ..	43	M.	Coleraine, .....	Carbon, .....	Face, neck and arm scalded by steam. Outside.
22	William Zick, .....	Polish, .....	Miner, .....	40	M.	Highland No. 2, ..	Luzerne, ..	Back and hips bruised by fall of coal.
23	Edward Fard, .....	American, ..	Miner, .....	40	M.	Spring Brook, .....	Carbon, .....	Face, neck and hands burned by explosion of dynamite.
25	Hugh McHugh, Jr., .....	American, ..	Laborer, .....	22	S.	Hazle Mountain, ..	Luzerne, ..	Scalp and face lacerated by fall of coal.
30	Michael Kartak, .....	Lithuanian, ..	Miner, .....	25	S.	Harwood Shaft, ..	Luzerne, ..	Face lacerated and shoulder injured by flying coal from shot.
Feb. 13	Stomslaw Lemsac, .....	Russian, .....	Laborer, .....	25	S.	Harwood, .....	Luzerne, ..	Back and hips bruised by fall of slate.
15	William Perkowski, .....	Polish, .....	Miner, .....	30	S.	Hazleton No. 1, ..	Luzerne, ..	Thumb and fingers lacerated by explosion of dynamite cap.
16	William Blackwell, .....	American, ..	Miner, .....	45	M.	Hazleton No. 1, ..	Luzerne, ..	Face, neck and hands burned by explosion of gas.
16	Henry Lewis, .....	American, ..	Asst. foreman, ..	44	M.	Spring Brook, .....	Carbon, .....	Leg crushed. Run over by loaded mine car.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
<b>Feb.</b>								
19	Andro Yuhas, .....	Slavonian, ..	Driver, .....	22	S.	Harwood, .....	Luzerne, ....	Hand crushed. Run over by loaded rock car. Outside.
20	Paul Valent, .....	Slavonian, ..	Miner, .....	44	M.	Lansford No. 5, .....	Carbon, .....	Eyes blown out by the explosion of a shot.
20	Alex. Yumofko, .....	Slavonian, ..	Laborer, .....	24	S.	Lansford No. 5, .....	Carbon, .....	Face and body injured by the explosion of a shot.
23	Joseph Dorsch, .....	American, ..	Laborer, .....	31	M.	East Crystal Ridge, .....	Luzerne, ....	Leg fractured by fall of slate.
24	George Mudrey, .....	Hungarian, ..	Miner, .....	39	M.	Eckley, .....	Luzerne, ....	Leg fractured and side injured by fall of coal.
<b>March</b>								
1	Ralph Kirschner, .....	American, ..	Laborer, .....	19	S.	Derringer, .....	Luzerne, ....	Seriously injured. Squeezed between motor tank and rib.
7	Joseph Patchell, .....	Italian, .....	Laborer, .....	19	S.	Hazleton No. 1, .....	Luzerne, ....	Hand injured. Caught between rope and sheave wheel. Outside.
8	Adam Poscavish, .....	Polish, .....	Miner, .....	27	S.	Hazleton Shaft, .....	Luzerne, ....	Head and body lacerated by explosion of dynamite. Outside.
8	Jno. Gashinski, .....	Polish, .....	Miner, .....	29	M.	Hazleton Shaft, .....	Luzerne, ....	Head and body lacerated by explosion of dynamite. Outside.
8	Jno. Prushock, .....	Hungarian, ..	Laborer, .....	17	S.	Highland No. 5, .....	Luzerne, ....	Leg lacerated. Caught between bumpers of cars.
12	Lawrence Reinhart, ..	German, .....	Miner, .....	50	M.	Hazle Mountain, .....	Luzerne, ....	Arm crushed by car which came back upon him when rope broke.
12	Joseph Mattuck, .....	Slavonian, ..	Laborer, .....	21	S.	Lansford No. 9, .....	Carbon, .....	Leg fractured. Struck by piece of coal at battery.
14	Joseph Kordolski, .....	Hungarian, ..	Miner, .....	24	M.	Hazleton Shaft, .....	Luzerne, ....	Concussion of brain by falling down man-way shaft.
14	Paul Ouster, .....	Lithuanian, ..	Miner, .....	37	M.	Lattimer, .....	Luzerne, ....	Face and hands burned by explosion of gas.
20	Joseph Boris, .....	Polish, .....	Miner, .....	25	S.	Hazleton Shaft, .....	Luzerne, ....	Seriously injured by fall of slate.
23	Alfred Rossi, .....	Austrian, .....	Miner, .....	24	S.	Derringer, .....	Luzerne, ....	Face and hands burned by explosion of gas.
24	Fornco Kozar, .....	Italian, .....	Miner, .....	30	M.	Harwood, .....	Luzerne, ....	Leg fractured by fall of coal.
26	Joseph Letavish, .....	Polish, .....	Miner, .....	29	M.	Drifton No. 1, .....	Luzerne, ....	Face, neck and hands burned by explosion of gas.
31	Steve Cowart, .....	Hungarian, ..	Laborer, .....	28	M.	Upper Lehigh, .....	Luzerne, ....	Leg fractured. Caught between cars on turnout.

<b>May</b>	17	Dorn Cheron, .....	Italian, .....	Laborer, .....	19	S.	Hazle Mountain, .....	Luzerne, ....	Skull fractured. Struck by a door under breaker. Outside.
	13	William Dinzmere, .....	American, .....	Miner, .....	26	S.	Hazleton No. 1, .....	Luzerne, ....	Thumb severed by axe slipping in making wedge.
	23	Andro Karney, .....	Hungarian, .....	Miner, .....	46	M.	Spring Brook, .....	Carbon, .....	Face and hands burned by explosion of gas.
	26	Christ Bontz, .....	American, .....	Loader, .....	23	S.	Hazleton No. 1, .....	Luzerne, ....	Pelvis fractured. Squeezed between gondola and breaker foundation.
	26	Neal McGluty, .....	Irish, .....	Miner, .....	51	M.	Cranberry No. 5, .....	Luzerne, ....	Nose fractured and eye injured by wedge striking him.
<b>June</b>	5	Dorn Lena, .....	Italian, .....	Locomotive patcher, .....	21	S.	Hazleton Shaft, .....	Luzerne, ....	Foot bruised. Caught between bumpers of cars. Outside.
	11	Albert Moritz, .....	American, .....	Miner, .....	35	M.	Nesquehoning No. 1, .....	Carbon, .....	Face and hands burned by explosion of gas.
	12	Jean Kokindo, .....	Hungarian, .....	Miner, .....	25	M.	Hazle Mountain, .....	Luzerne, ....	Head lacerated by fall of slate.
	12	Charles McShea, .....	American, .....	Miner, .....	25	M.	Spring Brook, .....	Carbon, .....	Head and arm lacerated by blast while tamping hole.
	12	John Balcha, .....	Lithuanian, .....	Miner, .....	37	M.	Spring Brook, .....	Carbon, .....	Head and arm lacerated by blast while tamping hole.
	13	Howard Hall, .....	American, .....	Loader, .....	22	S.	Lattimer, .....	Luzerne, ....	Pelvis fractured. Squeezed between car and props.
	15	Joseph Wydalis, .....	Polish, .....	Miner, .....	34	M.	Harwood, .....	Luzerne, ....	Leg fractured by fall of slate.
	22	John Thomas, .....	Hungarian, .....	Miner, .....	41	M.	Highland No. 5, .....	Luzerne, ....	Face and hands burned by explosion of gas.
	23	Verginia Sema, .....	Austrian, .....	Laborer, .....	22	S.	Highland No. 5, .....	Luzerne, ....	Face and hands burned by explosion of gas.
	26	Michael Valinda, .....	Polish, .....	Laborer, .....	27	S.	Cranberry No. 6, .....	Luzerne, ....	Leg fractured. Caught by car on slope.
	26	Peter Dudeck, .....	Polish, .....	Miner, .....	35	M.	Hazleton Shaft, .....	Luzerne, ....	Leg fractured by fall of slate.
	28	John Zepay, .....	Slavonian, .....	Laborer, .....	39	M.	Lattimer, .....	Luzerne, ....	Head and face lacerated by flying coal from shot.
<b>July</b>	29	Joseph Glosine, .....	Hungarian, .....	Laborer, .....	21	S.	Coleraine, .....	Carbon, .....	Leg fractured by fall of slate.
	29	William Peravitch, .....	Polish, .....	Miner, .....	35	S.	Ebervale, .....	Luzerne, ....	Leg fractured by fall of slate.
	2	Casmer Yankofski, .....	Polish, .....	Laborer, .....	20	S.	Hazle Mountain, .....	Luzerne, ....	Leg fractured by fall of coal.
	12	Joseph Mulson, .....	Hungarian, .....	Miner, .....	40	S.	Harwood, .....	Luzerne, ....	Arm fractured by flying coal from shot.
	13	John Crawley, .....	English, .....	Fan boy, .....	17	S.	Lattimer, .....	Luzerne, ....	Arm fractured by falling from powder keg upon which he was standing.
	13	Thos. Thompson, .....	American, .....	Bottom man, .....	20	S.	Harwood, .....	Luzerne, ....	Fingers crushed while uncoupling cars.
	14	Philip Wackly, .....	Irish, .....	Laborer, .....	20	S.	Highland No. 2, .....	Luzerne, ....	Body bruised by fall of rock.
	18	George Eckert, .....	American, .....	Locomotive patcher, .....	24	S.	Driton, .....	Luzerne, ....	Squeezed between cars. Outside.
	20	Jacob Kinker, .....	American, .....	Laborer, .....	26	M.	Hazleton No. 1, .....	Luzerne, ....	Leg fractured by fall of slate.
	27	John Berinski, .....	Polish, .....	Miner, .....	35	M.	Cranberry, .....	Luzerne, ....	Body bruised by fall of slate.
	27	Rock Marian, .....	Polish, .....	Laborer, .....	25	S.	Driton No. 1, Strip- ping, .....	Luzerne, ....	Seriously injured by explosion of dynamite while cleaning hole. Outside.
	27	Frank Stake, .....	Italian, .....	Laborer, .....	20	M.	Driton No. 1, Strip- ping, .....	Luzerne, ....	Seriously injured by explosion of dynamite while charging hole. Outside.
	27	Joseph Debrash, .....	Italian, .....	Laborer, .....	37	S.	Driton No. 1, Strip- ping, .....	Luzerne, ....	Seriously injured by explosion of dynamite while charging hole. Outside.
	31	Andro Shubeck, .....	Hungarian, .....	Miner, .....	25	M.	Spring Brook, .....	Carbon, ....	Leg fractured by fall of slate.
	31	Frank Tait, .....	Austrian, .....	Miner, .....	44	S.	Eckley and Mountain, .....	Luzerne, ....	Head injured by fall of coal.
<b>Aug.</b>	3	John Rander, .....	Slavonian, .....	Laborer, .....	28	M.	Hazle Brook, .....	Luzerne, ....	Leg fractured by fall of slate.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Aug.	4 Michael Melenduch	Slavonian	Miner	23 M.		Nesquehoning No. 1	Carbon	These men were burned about the face, neck and hands by an explosion of gas, caused by some one of the party opening his safety lamp while they were removing gas from face of gangway.
	4 Charles Sundy	Italian	Miner	23 M.				Leg fractured by a level striking him in the hip.
	4 John Raccoff	Slavonian	Laborer	27 M.				Leg fractured by explosion of dynamite.
	4 Patrick Sheridan	American	Laborer	28 M.				Face and hands burned by explosion of gas.
	4 Michael Thase	Slavonian	Laborer	28 M.				Face and hands burned by explosion of gas.
	6 George Hudesty	American	Pumpman	49 M.		Hazleton Shaft	Luzerne	Leg fractured by stick of timber striking him.
	8 Joseph Skapik	Hungarian	Miner	25 S.		Lansford No. 6	Carbon	Leg fractured by fall of slate.
	9 Paul Meshko	Hungarian	Miner	28 M.		Gowan No. 4	Luzerne	Leg fractured by fall of slate.
	9 Steve Milot	Hungarian	Miner	27 M.				Leg fractured by stick of timber striking him.
	10 John Kokulick	Hungarian	Miner	21 S.		Drifton No. 1	Luzerne	Leg fractured by fall of slate.
Sept.	13 Andro Prozk	Austrian	Miner	28 M.		Hazle Mountain	Luzerne	Squeezed between cars at bottom of slope.
	20 Michael Purick	Hungarian	Bottom man	21 S.		Coleraine	Carbon	Pun injured between the bumpers of motor and a truck.
	20 Bernard McNellis	American	Motor patcher	22 S.		Highland No. 5	Luzerne	Leg fractured by fall of slate.
	27 Skimko Oskiker	Russian	Laborer	27 M.		Harwood	Luzerne	Legs fractured by flying coal from shot.
	5 Frank Yetcutski	Polish	Miner	52 M.		Cranberry	Luzerne	Leg crushed by cars on stripping. Outside.
	5 Michael Lued	Italian	Blacksmith	42 M.		Lattimer	Luzerne	Jaw bone fractured. Caught between timber when jack slipped.
	7 Harry Hale	English	Laborer	22 S.		Highland No. 1	Luzerne	Arm fractured by falling against a building. Outside.
	7 Peter Danko	Slavonian	Slate-picker	15 S.		Lattimer	Luzerne	Arm fractured. Caught between derailed car and cribbing. Outside.
	20 Simon Hinkle	American	Locomotive patcher	20 S.		Beaver Meadow	Carbon	Arm fractured by falling on breaker floor. Outside.
	21 Walter Watkins	American	Slatepicker	15 S.		Coleraine	Carbon	Fingers crushed by machinery on breaker. Outside.
Oct.	9 John Gorie	Hungarian	Breaker oiler	30 M.		Drifton	Luzerne	Legs and feet burned by kerosene oil. Hand injured by fall of slate.
	13 James Burke	American	Pumpman	21 S.		Hazleton Shaft	Luzerne	
	19 John Potrack	American	Laborer	19 S.		Upper Lehigh	Luzerne	



Oct.	30	Leo Glubinski, .....	German, .....	Conveyor driver, .....	17	S.	Harwood, .....	Luzerne, .....	Fingers crushed by machinery on breaker. Outside.
	31	Michael Hizo, .....	Hungarian, .....	Driver, .....	31	M.	Lattimer, .....	Luzerne, .....	Jaw bone fractured by raising head too high and striking door.
Nov.	9	William Woodring, .....	American, .....	Laborer, .....	23	S.	Coleraine, .....	Carbon, .....	Bone in foot fractured by fall of slate.
	19	John James, .....	American, .....	Miner, .....	25	M.	Spring Mountain, .....	Luzerne, .....	Foot crushed by fall of rock.
	20	Peter Phillips, .....	American, .....	Motor runner, .....	28	M.	Highland No. 5, .....	Luzerne, .....	Collar bone and rib fractured. Run over by cars.
	21	August Lewis, .....	Hungarian, .....	Car oiler, .....	32	M.	Beaver Meadow, .....	Carbon, .....	Fingers crushed. Caught between sprag and shaft guide. Outside.
	22	Jacob Brenney, .....	Polish, .....	Miner, .....	24	S.	Hazleton Shaft, .....	Luzerne, .....	Head cut by falling down breast man- way.
	26	Valentine Kellog, .....	Austrian, .....	Miner, .....	49	M.	Derringer, .....	Luzerne, .....	Head cut by fall of slate.
	27	Thomas Dailey, .....	American, .....	Patcher, .....	15	S.	Lattimer, .....	Luzerne, .....	Hip dislocated and leg badly lacerated by falling between cars. Outside.
Dec.	4	Patrick McGuire, .....	Irish, .....	Miner, .....	37	M.	Highland No. 6, .....	Luzerne, .....	Seriously injured by explosion of dyna- mite.
	5	Hugh Phillips, .....	American, .....	Engineer, .....	25	S.	Jeddo No. 4, .....	Luzerne, .....	Leg fractured. Caught between pole and locomotive boiler.
	7	Matthew Porman, .....	Polish, .....	Miner, .....	38	M.	Cranberry, .....	Luzerne, .....	Seriously injured on face and shoulder by explosion of powder.
	19	Charles Lehr, .....	American, .....	Locomotive patcher, .....	21	S.	Derringer, .....	Luzerne, .....	Eye injured. Caught between locomotive timbers. Outside.
	12	Neal Perry, .....	American, .....	Miner, .....	31	M.	Beaver Brook, .....	Luzerne, .....	Severe abrasions about head by blast that he thought had missed.
	13	Batests Cleary, .....	Italian, .....	Laborer, .....	28	S.	Sandy Run, .....	Luzerne, .....	Leg fractured by fall of slate in gang- way.
	16	John Dause, .....	German, .....	Roadman, .....	47	M.	Hazleton Shaft, .....	Luzerne, .....	Leg fractured. Struck by piece of timber while unloading gondola. Outside.
	18	John Greinok, .....	American, .....	Driver, .....	18	S.	Eckley, .....	Luzerne, .....	Leg fractured. Caught by sprag in wheel of car on a grade.
	19	John Smith, .....	Polish, .....	Miner, .....	26	M.	Hazleton Shaft, .....	Luzerne, .....	Leg fractured by fall of slate.
	19	Michael Polanbo, .....	Italian, .....	Machinist, .....	27	S.	Harwood, .....	Luzerne, .....	Leg fractured by being caught between car and building. Outside.
	20	Joseph Nemeth, .....	Slavonian, .....	Miner, .....	29	M.	Lattimer, .....	Luzerne, .....	Leg fractured by flying coal from shot.
	21	Paul Breditski, .....	Polish, .....	Miner, .....	32	M.	Hazleton Shaft, .....	Luzerne, .....	Seriously injured by falling down breast manway.
	24	Michael Whitko, .....	Russian, .....	Miner, .....	23	S.	Hazle Mountain, .....	Luzerne, .....	Seriously injured by flying coal from shot that blew through pillar.
	24	John Schur, .....	Russian, .....	Miner, .....	23	S.			

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

February 26, Eckley Colliery, John Ebling, German, miner, was instantly killed by fall of coal while taking out pillars.

May 16, Cranberry Colliery, Jacob Baranoski, Russian, laborer, was instantly killed by fall of coal from face of breast. He had just taken the place of his miner, Joseph Washinski, who had been drilling a hole, and had gone to make up the powder.

May 31, Lansford No. 5 Colliery, Peter Markey, American, miner, was fatally injured, in the mawway, by coal that struck him while running away from a shot. He did not give himself time to reach a place of safety.

July 14, Highland No. 2 Colliery, William Talkofski, Polish, laborer, was instantly killed by fall of rock, in a small gangway, while loading a buggy of coal.

July 19, Spring Brook Colliery, Clemer Mahollick, Hungarian, laborer, was instantly killed by fall of dividing slate in a breast. He went under the slate after having been told by his miner that it was unsafe. He was shoveling coal back when it fell on him.

August 16, Hazleton Shaft Colliery, John Ducheck, Polish, miner, was instantly killed by fall of coal in breast. He was standing in front of the loose piece, barring it down, when it fell on him.

August 23, Upper Lehigh Colliery, George Fetchko, Hungarian, laborer, was fatally injured by a small piece of slate falling from roll, striking him on the head and fracturing his skull. He died shortly after the accident.

September 26, Hazleton Shaft Colliery, Slope No. 5, Michael Oselt, Italian, miner, was fatally injured by fall of coal. He had gone down along the pillar to fire a shot, without permission from the officials. After the shot had been fired he, in his hurry to put the coal into the chute, neglected to trim down the loose top coal, which fell on him.

November 13, Highland No. 5 Colliery, Charles McGill, Irish, miner, was instantly killed by fall of coal. He was in the act of drilling a hole in the pillar, that he was taking out, when a piece of coal from the pillar fell on him.

November 14, Sandy Run Colliery, Thomas Lewis, American, miner, was instantly killed by fall of coal. He was opening a chute from the gangway where there was loose coal. When he was about ready for a set of timbers the forepoling broke away, completely covering him.

## By Cars

January 29, Ebervale Slope, John Harbushack, Hungarian, driver, was fatally injured by falling under loaded car while running a trip of cars down a run.

February 3, Beaver Meadow Stripping, John Franko, Hungarian, driver, was fatally injured by being run over by a stripping car. His leg was so badly crushed that he died shortly afterward.

May 23, Hazleton Shaft Colliery, Slope No. 3, Andrew Craven, American, driver, was fatally injured by being squeezed between a car and a door frame in a tunnel.

August 30, Highland No. 2 Colliery, Clement Mornisko, Polish, laborer, was fatally injured by being caught between top of car and collar on the slope, while being hoisted to the surface.

October 1, Hazleton Shaft Colliery, John Corra, Austrian, miner, was fatally injured by being run over by a car that was pushed by an electric motor.

November 2, Upper Lehigh Colliery, Peter Damon, Hungarian, dump man, was fatally injured by being run over by a car while on his way home after work.

### Explosions of Gas and Dust

June 11, Nesquehoning Colliery No. 1, Owen Collins, American, miner, was fatally injured by an explosion of gas in a breast when entering it in the morning.

### Suffocated by Coal

May 23, Jeddo No. 4 Colliery, Wasil Molinock, Hungarian, laborer, was suffocated by a rush of coal in a small gangway, after he had been told by his miner not to touch anything in the face. His body was not recovered until several hours after the accident.

### Explosions of Powder and Dynamite

January 4, Hazleton Shaft Colliery, Steve Mastley, Tyrolean, and Andrew Jundack, Slavonian, miners, were fatally injured by an explosion of powder. These two men, with several others, were walking up along the turnout, from bottom of shaft, after having received their powder. When they arrived at the upper end of the turnout, they attempted to cross from one side of the cars to the other and in some manner a keg of powder exploded. The fire was communicated to another keg which also exploded.

### Premature Blasts

January 24, Lattimer Colliery, John Smith, Polish, miner, was instantly killed by flying coal from a shot that he thought had missed fire. He was firing two shots at the same time; one shot exploded, and after waiting a short time, he thought the other had missed fire and started from the cross cut just as the other shot exploded. A piece of flying coal struck him on the head, killing him instantly.

February 15, Harwood Colliery, Elias Bukbizit, Servian, laborer, was fatally injured by flying coal from a shot that was fired in a pillar in the adjoining breast. A small piece of coal was blown through the cross-cut, striking him on the head. The miner who fired the shot had given him warning, but he evidently thought he was in a safe place.

February 24, Jeddo No. 4 Colliery, William Birtch, Polish, miner, was instantly killed by a blast while tamping a hole.

March 15, Cranberry Colliery, Fred Hoffinch, German, miner, was instantly killed by an explosion of dynamite while tamping a hole with an iron drill.

March 21, Spring Brook Colliery, Michael Pavlick, Hungarian, miner, was instantly killed by flying coal from a shot. He did not give himself time to reach a place of safety.

November 15, Cranberry Colliery, Stanley Matushefski, Lithuanian, miner, was instantly killed by returning to what he supposed to be a missed shot.

December 11, Cranberry Colliery, Casmer Brisinski, Polish, miner, was instantly killed by returning to what he supposed to be a missed shot.

#### Falling Into Slopes, Etc.

January 8, Spring Brook Colliery, Edward Malloy, Irish, miner, was fatally injured by falling down the manway of his breast.

July 28, Hazleton No. 1 Colliery, Joseph Chickofski, Polish, miner, was fatally injured by falling down the manway of his breast.

December 21, Hazleton Shaft Colliery, Alexander Kodaski, Polish, miner, was fatally injured by falling down the manway of his breast.

#### Miscellaneous

March 30, Highland No. 5 Colliery, John Chigo, Hungarian, laborer, was fatally injured by a prop striking him on the head and fracturing his skull. A piece of top rock fell, striking the prop and knocking it out.

November 12, Lansford No. 4 Colliery, Benjamin Walker, Irish, pumpman, was fatally injured by being struck on the head by a piece of board. He was on the cage, being hoisted to the surface after work, when a piece of board became loose in some manner, fell down the slope, and struck him on the head, fracturing his skull. He died several days after the accident.

#### Machinery Outside

January 24, Lansford No. 4 Colliery, Albert Surma, Polish, roll tender, was fatally injured. Someone had neglected to replace a box which covered the cogs of a set of rolls and while he was crossing over the rolls the box tilted, and his leg was caught in the cogs. He died from his injuries shortly after the accident occurred.

September 22, Hazleton No. 1 Colliery, Lawrence Leitner, American, roll tender, was fatally injured. A box covering a set of rolls had been removed to clean the rolls which were installed. This box had not been replaced and Leitner, while walking over shortly after, stepped into the hole. One leg was so badly crushed by the rolls that he died the next day.

#### Miscellaneous, Outside

March 22, Lansford No. 6 Colliery, George Tokay, Hungarian, laborer, fell from the breaker, a distance of thirty feet, striking his head on the sill and breaking his neck.

July 27, Drifton No. 1 Stripping, John Dougherty, American, stripping foreman, was fatally injured by an explosion of dynamite while charging a hole with an iron pipe.

September 26, Drifton No. 1 Stripping, Egnatz Veturiski, Hungarian, laborer, was fatally injured by being thrown over a car. He fell on his head, fracturing his skull.



October 26, Hazleton No. 1 Colliery, William Sauers, American, carpenter, was fatally injured by falling from an old scraper line that he and several others were taking down. He struck his head and broke his neck.

November 27, Eckley and Buck Mountain Stripping, Andrew Hal-ko, Hungarian, laborer, was suffocated by being engulfed in a cave on the stripping. He was walking over the surface when the earth gave way under him, and he was precipitated into the old workings to a depth of forty feet. It took a week to recover his body.

December 7, Hazle Brook Stripping, Toney Young, Italian, assistant foreman, and George Chapura, Slavonian, laborer, were instantly killed by an explosion of powder. They had prepared a shot in front of the steam shovel, in the clay. After springing the hole three times they placed three kegs of powder in it. It was thirteen feet deep. The men about the shovel were told that the powder was ready to be fired, and all went to a place of safety. Shortly after, there was a slight explosion. Young and Chapura started to go back to the hole, but Robert Wilson, the foreman, and others shouted to them not to go, for they thought that all of the powder had not exploded. They, however, went back and were in the act of running a tamping stick into the hole, when the balance of the powder exploded. The accident was referred to a Coroner's jury, who placed the blame on Young.

## IMPROVEMENTS

### LEHIGH COAL AND NAVIGATION COMPANY

No. 1 Colliery,—150 feet of No. 2 coal shaft has been sunk. This shaft is to be 14 feet by 18 feet. 200 feet of tunnels have been driven from the bottom of No. 1 Shaft toward No. 2 Shaft. Also finished the open cut to drainage tunnel.

Drove 184 feet of the drainage tunnel from the Lehigh River toward the Nesquehoning mine at an elevation of 546 feet above tide level. This tunnel will be driven 7,500 feet to the basin of the Buck Mountain vein, and from that point a gangway will be driven west on the Buck Mountain vein 10,000 feet to the bottom of No. 2 Shaft, 160 feet under the present Nesquehoning workings.

No. 4 Colliery.—Completed an outlet on the "C" vein 1,000 feet in length in the fourth level of No. 4 Slope. Sunk a trial slope on the "C" vein 75 yards from the fourth level of No. 4 Slope, from which point a gangway will be driven west 900 feet on the Mammoth vein, and thence a tunnel 2,400 feet long to the north to the bottom of the proposed new shaft near the present No. 6 breaker. Commenced sinking the new shaft, size 14x38 feet, with six compartments, four for water, and two for coal. This shaft will be about 1,200 feet in depth.

Installed new electric haulage system both inside and outside of Nos. 4, 5 and 6 Collieries, the power for which comes from a central power plant at Lansford.

No. 6 Colliery.—Commenced the erection of an additional 600 H. P. battery of Stirling boilers.

No. 9 Colliery.—Commenced the erection of 42x60 inch water hoisting engines.



**Summit Hill Fire.**—Bored 116 drill holes at an average depth of 141 feet during the year, making a total of 436 holes drilled into the fire from the beginning of operations.

#### COXE BROTHERS AND COMPANY, INCORPORATED

##### Drifton Colliery, Outside

Plans have been completed and work commenced on addition to the breaker, to enable them to elevate and reprepare screenings from the breaker, thus avoiding the necessity of loading the same into mine cars to be rehoisted. This will give a greater capacity for fresh mined coal on breaker and breaker engine, and reduce the number of men usually employed in the handling of such material.

The work of installing a 6 inch steam line from their main 10 inch line, extending westward 7,500 feet to a bore hole connecting with the inside workings, for the purpose of furnishing steam to engine and pumps underground and two fans on surface, has been commenced. The object of this steam line is to do away with the necessity of keeping in operation a boiler plant underground, which has been in a measure a menace to mining operations at this colliery. They expect to have the connection made in the early part of 1907, when the said boiler plant will be abandoned.

**Stripping.**—At the Drifton-Lattimer Stripping, 269,846 yards of material were moved by four steam shovels, which brings the total yardage moved at these strippings to 2,119,069. About 600,000 yards remain to be moved. Over 80,000 tons of coal have been mined from this stripping during the year.

##### Inside

At Drifton Slope No. 2 the tunnel driven to the Lattimer Stripping territory has been continued and has penetrated the Gamma vein which is in poor condition—not workable. The tunnel has also reached the Wharton vein, in which the gangway was driven to the boundary line pillar to the West, and the East Gangway is being driven at present. The latter vein was cut in fair condition, but the strata intervening between the Wharton and Mammoth veins have increased considerably, as developed in the Stripping on present levels it is from three to four feet, the tunnel has already gone beyond the Wharton vein about 100 feet without striking the Mammoth. It is evident that an upheaval frequently encountered in the overlying vein corresponding to a basin in the lower measures and it is expected that it will require about fifty or sixty feet more to strike the Mammoth vein.

##### Eckley Colliery, Outside

During the year it was decided to commence the work of general repairs on breaker. Thus far the foundation walls have been torn down and repaired, or replaced, by substantial stone walls. The repair work will be continued in 1907.

A dam has been constructed near the Western boundary line of the Eckley property, about 250 feet long by 8 feet wide, for the purpose of taking care of the breaker wash.

**Stripping.**—At Buck Mountain five shovels were in operation extending the Strippings.

At Buck Mountain No. 11 they have moved 92,174 yards, bringing the total from these strippings to 119,440 yards. No coal was mined from that section.

From the strippings overlying the abandoned Buck Mountain No. 6 workings 158,914 yards were moved, or a total of 251,603 yards to January 1, 1907. Coal was mined from these strippings during 1906.

The original Buck Mountain strippings in the spoon end of Slope No. 1 have been extended, 196,549 yards having been moved, bringing the total up to 933,579 yards to January 1, 1907.

### Inside

Two tunnels have been started; one west of Slope No. 2 to shorten transportation of coal to be mined from the old Trial Slope workings, which are at present submerged. It is proposed to sink a ten inch drill hole from surface to Trial Slope, to convey steam to hoisting engine and to pump and carry the exhaust to the surface.

The second tunnel was started in a northwesterly direction at the spoon end of the present water level. It will be driven through the overlap saddle and will open the coal south of the Highland No. 5 workings of G. B. Markle and Company and will give access to the higher levels of the old Trial Slope workings for robbing.

Buck Mountain.—The No. 2 West Gangway, started off the main drainage tunnel, has been continued and has almost reached opposite Slope No. 11. When this point is reached a connection will be made and coal hoisted on Slope No. 11, which will save over two miles of transportation. As No. 2 West Gangway is driven through old workings, occasional squeezes interfere and large pillars are left between breasts so that only three and four breasts at a time are being worked on that gangway. If connection is made with Slope No. 11, it will give a safe outlet in both directions to men working in that section.

A water drainage course was decided upon and driven at this colliery, connecting the Eckley Colliery with the old Morgan Jones Slope workings. Thus putting this colliery on a water level drainage basis, making it necessary to pump water only for the preparation of coal.

Beaver Meadow Colliery.—The No. 4 Slope boiler plant has been dismantled.

Strippings.—Stripping operations have been continued in the Greenfield Basin and 80,827 yards moved, making the total number of yards moved from that basin \$56,286. to January 1, 1907.

Nothing of any account was done in the No. 8 Stripping and stripping operations were at a standstill in North Temperance Strippings, from which coal was taken continuously during the year.

Inside.—The main drainage tunnel was completed. At a distance of 2,219 feet it tapped the No. 2 slope workings and makes Beaver Meadow colliery a water level operation. At present pumping is only required for breaker preparation purposes.

The drainage tunnel was extended to the South 240 feet to open the Buck Mountain vein on the south side of the basin.

A new tunnel has been started east of Slope No. 4 on water level to open the underlying veins and veins north of the overlap, which had been proved by diamond drill holes in the early 70's.

Connection has been made with Main Hoisting Slope by a breast driven on line of slope. The intention is to connect the water level workings with the Main Hoisting Slope and handle all coal through that slope. The slope is equipped with a strong pair of hoisting

engines, is operated with a barney and three cars could be hoisted at a time. The capacity of the slope is estimated at 600 to 650 cars, which will take ample care of the coal offered.

Stockton.—The coal at this slope was mined above water level and taken on transfer trucks to Beaver Meadow breaker for preparation.

Tunnel near the eastern boundary line extended with the intention of striking the Gamma vein on the south side of the basin.

The coal from the Western section—from a point about 500 feet east of No. 5 Slope, will be taken to Hazleton Shaft breaker for preparation. Connection is made and the gauge of the tracks changed to suit the Hazleton mine cars.

Derringer Colliery.—New oil house constructed.

An addition was built to the car shop and the machinery, etc., removed from the old machine shop and placed in the new addition, thus consolidating the work. Changes were made in the old machine shop and same converted into a warehouse.

The Gowan No. 4 locomotive house has been practically rebuilt and made fire-proof.

Inside.—No special work was done, only gangways continued in the different veins.

Gowan No. 4.—Gangways were continued.

Gowan Nos. 1 and 3.—At this operation preparations are being made to open the workings below water level. An 8 inch drill hole was put down to the top of Slope No. 6, under which name the new slope will be known, to carry the steam from the North Tunnel boiler house to hoisting engine and pump. The bore hole is also intended to take care of the exhaust steam. The production was principally obtained from the Wharton vein, east and west of the North Tunnel.

Tomhicken Slope.—Slope No. 8, opening the middle basin of the East Slope workings, has been continued in rock and a level started off the slope to reach the top split of Mammoth vein.

A tunnel about 500 feet west of the eastern boundary line has been driven from the Wharton vein to the Buck Mountain, which had been proved by hand diamond drilling.

A slant road has been driven in No. 4 East Gangway to reach the elevation of the top split basin, and the top split of the Mammoth has been opened by a tunnel driven from this slant.

About 1,500 feet of counter has been driven in the Buck Mountain vein from No. 12 East to make accessible Buck Mountain vein on the flat to the South of the present workings.

#### G. B. MARKLE AND COMPANY

Jeddo No. 4.—Four short tunnels, averaging 45 to 60 feet in length, driven from the Big vein to the Wharton.

Plain L driven from West Gangway C, Slope A, Oakdale No. 1, to elevation 1,232, Wharton vein, a distance of about 210 feet.

One steam drag saw installed for cutting timber.

Removed one Jeaneville pump, Oakdale lift.

Ebervale.—Plane D driven from third lift No. 3 west side to West Gangway B, Ebervale No. 1.

Plane E and airway driven from third lift No. 1 through the top rock to Primrose vein, West Gangway E, Plane A.



Plane F driven from second lift, Ebervale No. 3, to third lift, Ebervale No. 3.

Three-inch steam pipe line constructed from Ebervale No. 1 to Ebervale No. 3 fan.

Highland No. 5.—Drove Tunnel N from Highland No. 5 Bottom to a proving hole driven in the third lift, Pink Ash, a distance of 115 feet from elevation 1,121 to 1,181.

Water-way driven from West Gangway C, Slope A, to South Gangway C, Pink Ash, to provide overflow for water from third lift workings.

Drove Slope B from West Gangway A to bottom of basin, a distance of 543 feet, from elevation 1,109 to 847, and installed in the slope a hoisting engine, size 14x18, together with steam and exhaust pipe lines.

Built concrete wall in airway at Top Lift pump.

Drove Plane J from East Gangway A, Plane I, a distance of 270 feet, from elevation 1,181 to elevation 1,321.

Highland No. 2.—A pump house was made at first lift Highland No. 2 east of the present bottom. Jeunesville compound Duplex pump, 16x16x12x36, placed in this pump house, column-way opened up to surface, and column and steam pipe lines put in place.

Two Erie City 100 H. P. boilers taken out of Ebervale No. 3 were added to boiler plant at Highland No. 2. An addition was built to the boiler house to accommodate these boilers.

Permanent ditches were constructed outside the north and south outcrops of the Buck Mountain vein on the easterly half of the property, and an intercepting ditch with vitrified pipe culverts was provided to take care of water reaching the centre of the basin on the westerly half of the property.

Vitrified pipe lines with timber culvert outlet constructed at Highland No. 2 breaker to convey mine water from the pumps into the new south outcrop ditch.

Concrete wall put in main bottom west side, replacing wood work in main airway.

Highland No. 6.—Tunnel driven a distance of 140 feet from West Gangway A to a roll.

Highland No. 1.—Re-opened Slope C and pumping started.

Jeddo.—Two shelter sheds built near Jeddo stables.

#### LEHIGH VALLEY COAL COMPANY

Hazleton No. 1 Colliery.—A slope in the Four Foot was driven from the surface a distance of 375 feet to the third lift. Two Lehigh Valley jigs installed in breaker.

Hazleton Shaft Colliery.—A rock slope, 400 feet long, on a dip of 41 degrees, was driven from No. 40 Slope in the Wharton vein, southeasterly to the Gamma vein. An 8 inch rope hole, 120 feet deep, was sunk from the surface to the Buck Mountain vein.

A slope 320 feet long was sunk in the Buck Mountain vein from the East gangway, North tunnel, second level.

The South tunnel, second level, was widened out five feet for a distance of 303 feet.

Electric haulage extended from Hazleton Shaft, second level, to the Buck Mountain workings in No. 5 Slope, a distance of 4,200 feet, thereby allowing the No. 5 Gunboat slope to be abandoned.

Five Lehigh Valley jigs installed in breaker.

Stockton No. 2 Slope.—Rock tunnel across the basin on first lift completed and the following veins opened up:—Tracey, Diamond and Orchard, on both dips.

Spring Brook Colliery.—A rock tunnel 240 feet long was driven in No. 2 Slope from the Lykens Valley to the Lykens Valley on the 5th Lift. A 4 inch steam line, 750 feet long, was put in from No. 6 boiler-house to the breaker. Four Lehigh Valley jigs installed in breaker.

Spring Mountain Colliery.—Buck Mountain slope from surface on south dip completed. A modern boiler plant, to consist of 1,500 H. P. of Stirling boilers housed in a concrete building, nearly completed.

#### PARDEE BROTHERS AND COMPANY

A tunnel has been driven south from the Mammoth vein, 310 feet east of the foot of Slope No. 10 to the Gamma vein in line with Slope No. 9.

A tunnel has been started north from the lower split of the Buck Mountain vein, Slope No. 2, to tap the underlying veins.

A rock hole has been driven from the West Mammoth Vein Gangway off Slope No. 1 which tapped the Primrose vein basin at the foot of Slope No. 11.

Slope No. 12 has been sunk 235 feet on an average pitch of 50 degrees from the level of the West Gamma Gangway, Slope No. 2.

At the back basin a tunnel has been driven north from the Gamma to the Buck Mountain vein, about 10 feet east of tunnel No. 17.

A slope has been started on the north dip of the Primrose vein near the eastern land line which will be sunk to the basin for the purpose of working and robbing same previous to the robbing of the Mammoth vein in this neighborhood.

A tunnel has been driven south from the West Gamma Gangway (Orphans Home) a distance of 187 feet to the Buck Mountain vein.

Started to sink a slope in the Buck Mountain vein south dip off Tunnel No. 22 in the No. 1—2nd Counter Stripping.

A tunnel has been driven north from the Mammoth Vein stripping in No. 3 Tunnel Basin, a distance of 35 feet to the Gamma vein and a gangway is being driven west through Milnesville.

Two cement dams have been built, one in the airway and one in the gangway of the East Mammoth vein from the foot of Slope No. 6, to protect Slope No. 10 from a drowning out in case of high water.

At Milnesville a slope has been sunk on the south-dip of the Primrose vein off Slope 7, a distance of 126 feet to the basin and gangways started east and west.

Installed two new Heine safety boilers, of 334 H. P. each, at No. 4 boiler plant, making the total capacity of this plant 2,756 H. P.

A new fan-house and fan with direct connected engine have been erected on the north crop of the Gamma vein over a shaft which has been sunk to the face of Breast No. 54 on the West Gangway, Back Basin.

A new fan-house and fan with direct connected engine have been erected over the airway in the Primrose vein opposite Slope No. 11.



## ESTATE A. S. VAN WICKLE

Coleraine Colliery.—A rock slope 7x9 feet was sunk in the No. 7 Basin, south dip, from the surface to the Gamma vein, a distance of 270 feet, and continued in coal 270 feet; total depth of slope 549 feet.

Erected an engine and boiler house, installed a pair of 12x18 hoisting engines, and two high pressure boilers to operate the same.

In the Buck Mountain slope a tunnel 7x9 feet was driven through a split in the Buck Mountain vein, a distance of 60 feet.

In the No. 1 slope, a self-acting plane was driven, distance 500 feet.

Removed twelve cylinder boilers from No. 1 boiler-house, and installed 750 H. P. Climax and Vulcan high pressure boilers. The old boiler-house has been abandoned and the boilers removed.

## UPPER LEHIGH COAL COMPANY

Upper Lehigh Colliery.—At eastern end of property a 48 foot rock tunnel was driven to second small seam underlying the Buck Mountain, a new 150 H. P. boiler placed at same slope, a 500 foot steam line run to artesian well north of slope, a plane and pocket erected for coal, a new boiler plant installed at No. 2 slope, consisting of five Maxim high pressure boilers of 350 H. P. each, and a new building about same; also a 350 foot 15-inch terra cotta pipe line for conveying ashes away from boilers. A new ditch 4,000 feet long was made at western end of property and north of basin, for surface drainage, and four steam shovels were in operation during the year excavating 188,000 yards of earth and rock.

## C. M. DODSON AND COMPANY

Beaver Brook.—A breaker was built and put in operation during the year as an annex to Breaker No. 10, and designed to rehandle the refuse banks on the property.

A railroad on the surface was built, connecting Slope No. 15 with the breaker, to take the coal from that slope overland to the breaker.

Inside Slope No. 15 was completed with the necessary turnouts. Sump, pump-room and the gangways east and west opened. A tunnel was driven south across the basin on the east side to all the opposite dip of the Buck Mountain vein. This tunnel is now continuing south to cup the corresponding dip of the Lykens Valley vein. A tunnel was driven north cutting the south dip of the Lykens Valley vein in good condition.

A rock plane was driven from the foot of No. 11 Slope to cut the synclinal of No. 8 basin in the Wharton seam.

A plane was put in to take the coal out of the intermediate basin between Slopes Nos. 11 and 8.

Slope No. 12 in the Gamma vein overlying No. 10 was re-opened and a pair of hoisting engines erected to take out the coal in that vein east and west of No. 10.

## POND CREEK COAL COMPANY

Pond Creek Colliery.—Installed two 72-inch x 18 feet return tubular boilers at breaker, making central plant of same with total of 500 H. P.

Constructed 3,500 feet four-inch steam line from breaker to No. 2 Slope, discontinuing use of line from Shaft to No. 2.

Built plane from mouth of No. 1 Slope to top of breaker, dispensing with elevator and conveyor lines.

Installed one set 18 inch x 24 inch bone rolls, two Hazleton plunger jigs and one 3 foot x 9 foot lump coal shaker.

Rebuilt two shakers, moved two sets of rolls to top and remodeled breaker in general at an expenditure of \$25,000.00, increasing the capacity to 400 tons.

Installed one 10x12 Florey hoist for plane and one 10x12 jig engine.

Sank 7 inch bore hole, at breaker, 216 feet deep, for water for boilers installing one 10x10x10 inch Platt compressor and Pardee lift in connection therewith.

Constructed 1,500 feet 3 foot gauge track, on surface, to convey coal from various openings to breaker, in mine car, dispensing with railroad cars formerly used.

Added to equipment, one twelve ton "Dixon" locomotive and twenty-five mine cars.

Abandoned workings at shaft, keeping steam plant intact for pumping in emergencies.

Re-opened to second level, old slope driven by M. S. Kemmerer and Company, on north dip of Buck Mountain vein.

Sank slope (to be known as No. 7) on south dip of Lykens vein from surface to basin, a distance of 412 feet, also airway.

West Wharton gangway driven to boundary pillar line as arranged for between Pond Creek Coal Company and G. B. Markle and Company.

#### BLACK CREEK COAL COMPANY

Harleigh.—A new slope was sunk in the Buck Mountain seam, and hoisting engine installed; two pumps placed at bottom of slope, a sump was also made; a new track laid at bottom of slope; a fan placed on the Gamma seam, and an airway driven to surface for ventilation; a steam pipe line was laid from the pumps to the engine; the mule barn was remodeled; one set of boilers rebuilt, and a wash house for men erected.

#### Report of the Arbitrators Relative to the Dam Between the Cranberry and Harwood Collieries

In the matter of the dam and the condition of its surroundings between the Cranberry Colliery and the Harwood Colliery, the Board of Arbitrators are asked by Messrs. A. Pardee & Co. and Calvin Pardee & Co., to reconsider the plan which they recommended July 12th, 1905, and, by the consent of the Chief of the Department of Mines, who was requested by the District Inspector, Mr. David J. Roderick, to re-open the case, the Arbitrators, Mr. W. A. Cochran, representing Calvin Pardee & Co., Mr. J. E. Anderson, representing A. Pardee & Co. and Mr. T. D. Jones, representing the District Inspector, have agreed to act for the second time in formulating a

plan, which it is hoped will be practicable and acceptable to all parties concerned.

The only advantage that we can see in changing our former plan is that the one herewith submitted required less coal to be left in the Cranberry property for the protection of the dam, and also that the burden of taking care of the water and culm used in silting the workings will now go to Harwood side instead of to Cranberry; therefore we have agreed to submit the following plans and suggestions:

### Article I

That a slope be sunk from the outcrop of the Parlor Vein, beginning about 50 feet west of the boundary line, and run across the pitch on course S. 72½ degrees E. to the north corner of the cement dam now in place, and to have three branches off the main slope, as indicated on the map, connecting with the heads of breasts, to facilitate the getting out of the loose stuff to give room for silting as well as to take up the bottom "bone" to thoroughly examine the bottom rock over the entire area of the trespass, the slope to be of sufficient width to allow a traveling-way along the side.

### Article II

1. That a branch slope be sunk from the main slope at the point marked "A," through the intervening strata, into the Wharton Vein, to where it would cut the face of Breast No. 15 of East Gangway "C", as indicated on the map by letter "B". It is desired, however, on the part of Calvin Pardee & Co. that they be permitted to sink a shaft through the intervening strata to strike the face of said Breast No. 15 of East Gangway "C", instead of a slope, in case they find that a shaft would be more advantageous in accomplishing the purposes desired. To this the Arbitrators see no objections.

2. If, after re-opening the Wharton breasts for examination to fully determine the pillar-line, from drainage level (1613) down to point marked "C", the workings in the Wharton Vein are found to be as shown on the map we do not deem it necessary to flush this vein with silt, but, if the conditions are found to be other than as represented on the map, whereby the workings of the Wharton Vein have trespassed or endangered the stability of the pillar, we would advise that ample provisions be made to fill the face of the workings in the Wharton Vein, either through the slope, or by means of bore holes; the amount and character of the work depending upon the extent and condition of the workings. The details of this portion of the plan are somewhat uncertain, but, with the present information, it is our judgment that this method can be successfully carried out.

3. As to the extent of the flushing of culm into this portion of the Wharton workings we recommend that it be left to the discretion of the Inspector, hereinafter provided for.

4. Before silting the Parlor Vein with fine coal dirt, the refuse is to be cleared away from the area to be filled, building a dry wall with the rock and slate on the line indicated on the map by letters "D", "E", "F", from drainage level (1613) down to the local synclinal shown in the Parlor workings, in such manner as to retain the culm



and allow the water to escape by percolation; first sealing the short tunnel through said synclinal by means of a water-tight wall, marked "Y", and also fill the man-holes through the cement dam with concrete.

In this connection would say, that we are of the opinion that the cracks in the Parlor Vein bottom rock, just west of the cement dam, have been caused by the robbing of the Wharton in Cranberry, and for this reason we have deemed it necessary to take up the bottom "bone" in the trespass area so as to expose the cracks and give the silt free access to these openings.

### Article III

To secure the permanency of the cement dam and the dam or dams put in the Parlor Vein, and, if necessary, in the Wharton Vein by slushing silt thereinto, we are of the opinion that ample pillars should be reserved on the Cranberry side in each vein, to wit:—

1. That a pillar be reserved in the Parlor Vein, extending in the general outline as indicated on the map by letters "G", "H", "I", "J", "K," more particularly described as follows, to wit:—Beginning at a point located at a distance of 60 feet at a course N. 33 degrees 20 minutes E. from a point in the South line of the Sarah Kunkle tract and which is 242½ feet North-westward (Measured along said boundary line) from the Brownstone Corner at South angle in said line, thence N. 5 degrees 15 minutes W. 120.25 feet to a point "H", thence N. 45 degrees 01 minute W. 162.36 feet to a point "I," thence N. 4 degrees 29 minutes W. 84.81 feet to a point "J", thence S. 86 degrees 17 minutes W. 322.01 feet to a point "K," which is also 60 feet, measured at right angles, from said boundary line; the intention being to leave a pillar of 100 feet in width from the face of the trespass.

And on the Harwood side of the boundary line, we would recommend that no more coal be mined within 100 feet of the boundary line in question.

2. That a pillar be retained in the Wharton Vein, in Cranberry, extending in the general outline as indicated on the map by letters "L", "M", "N", more particularly described as follows, to wit:—Beginning at a point "L," directly under point of beginning of the pillar in Parlor Vein, as described above, thence N. 5 degrees 15 minutes W. 120.25 feet to a point "M", thence N. 45 degrees 01 minute W. 130 feet to a point "N", which is at the intersection with the South side of West Gangway "C", or Gangway No. 18; and that no further mining shall be done in the territory west of the line beginning at said point "N" and following thence N. 45 degrees 01 minute W. 33.36 feet to a point "Z", thence N. 4 degrees 29 minutes W. 210 feet to drainage level.

We deem it inadvisable to mine any more coal from the Wharton Vein on Harwood side of the boundary line, from pillars that may remain, within 100 feet of the boundary line and north of the basin between East Gangway "C" and "I" of Harwood workings, Slope No. 4, and that said basin be left intact, for the reason that if this coal be mined it would in all probability cause the rock between the Wharton and Parlor Veins to draw from under the dams and destroy their usefulness.

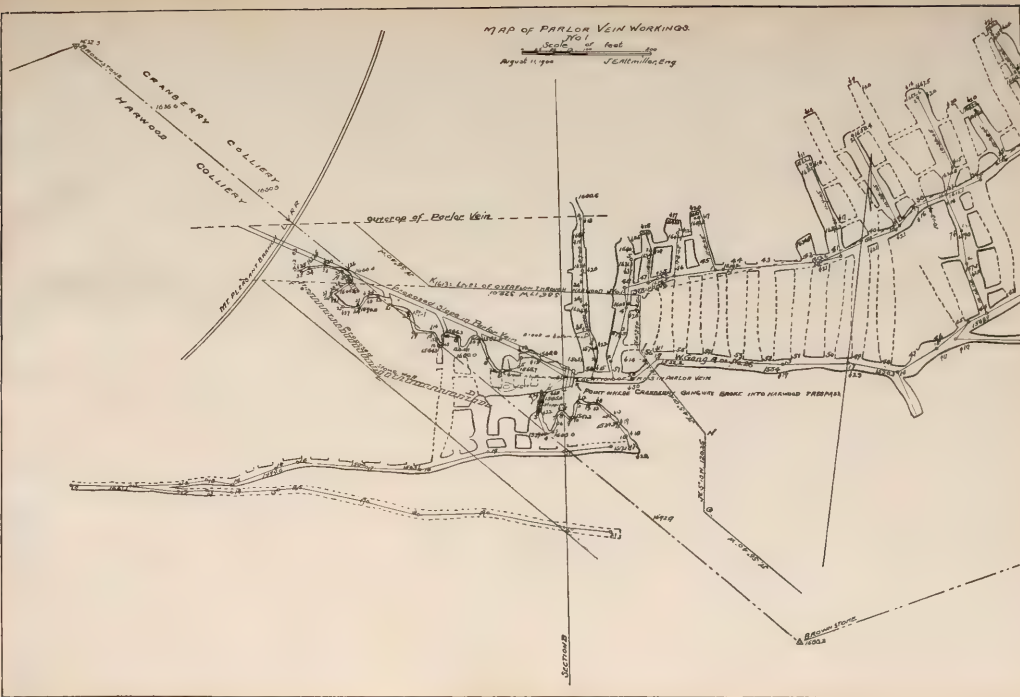
# MAP OF PARLOR VEIN WORKINGS.

No 1

Scale of Feet

August 11, 1900

J. E. Miller, Eng.



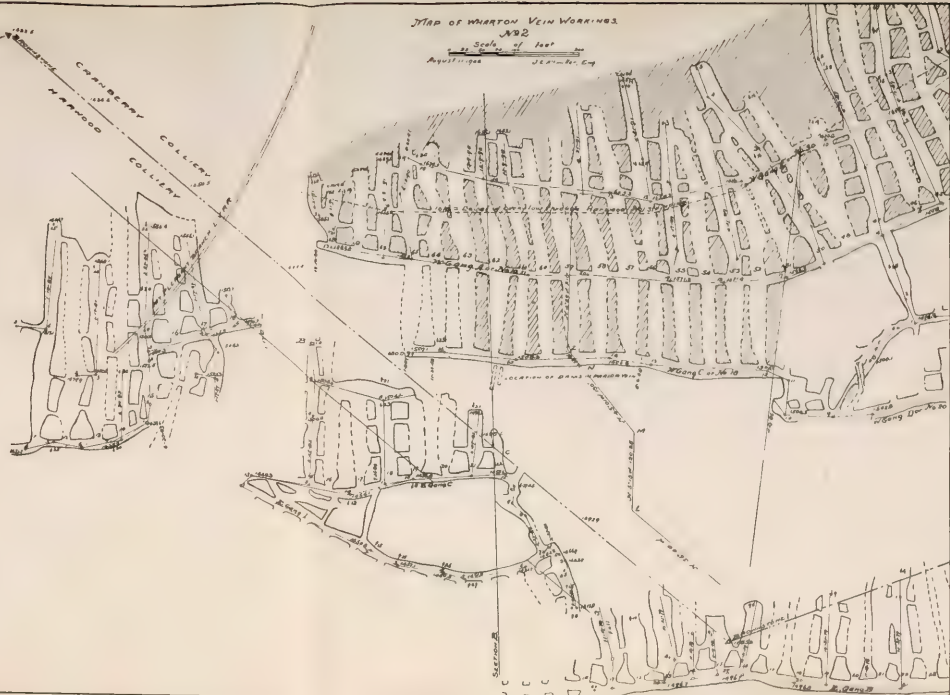


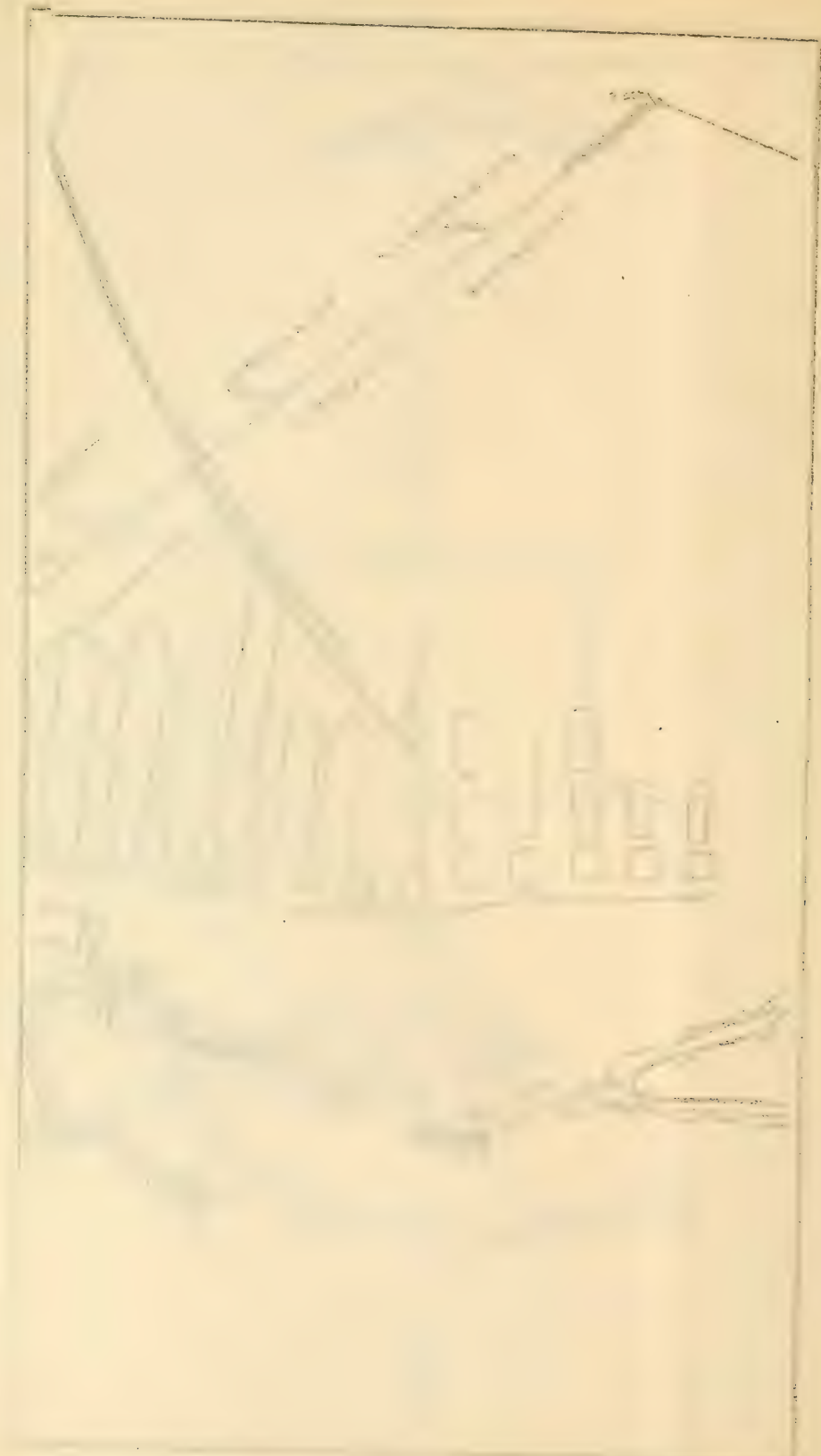


# MAP OF WHARTON VEIN WORKINGS

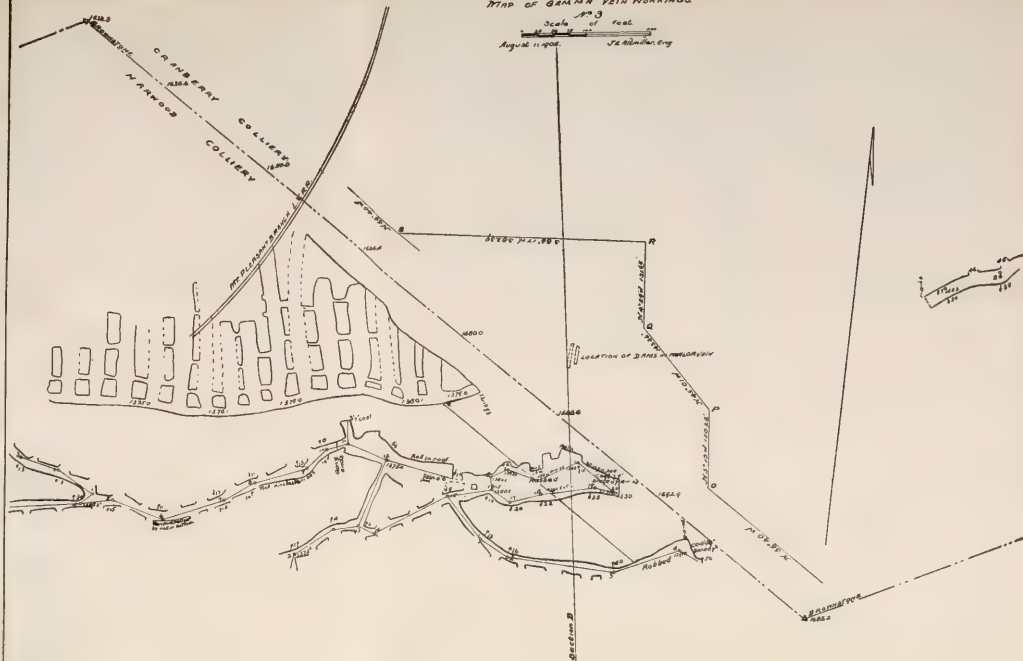
NO. 2

Scale of feet  
August 11, 1908  
J. E. A. M. P. Co.





No 3  
 Scale of feet  
 August 11 1908. J. A. McMillan, Eng.











3. Also that a pillar be retained in the Gamma Vein on Cranberry property conforming to the general outline as indicated on the map by letters "O", "P", "Q", "R", "S", more particularly described as follows, to wit:—Beginning at a point, "O," directly under the point of beginning of the proposed pillar in the Parlor Vein, as described above, thence N. 5 degrees 15 minutes W. 120.25 feet to a point "P", thence N. 45 degrees 01 minute W. 163.36 feet to a point "Q", thence N. 4 degrees 29 minutes W. 131.65 feet to a point "R", thence S. 86 degrees 17 minutes W. 383.39 feet to a point "S", said last named point being also 60 feet, measured at right angles from the boundary line.

In regard to the Gamma Vein on the Harwood side of the boundary line, inasmuch as a pillar of only about 50 feet has been left in on the north pitch, we request that this pillar of 50 feet be retained along the boundary line, down to gangway at elevation of 1379.6, and that the pillar from this gangway southward be made 100 feet in width along the boundary line to the gangway on south pitch, or on south side of the synclinal.

4. That a pillar be retained in the Buck Mountain Vein on Cranberry property, conforming to the general outline as indicated on the map by letters "T," "U," "V," "W," "X," more particularly described as follows, to wit:—Beginning at a point "T", which is directly under the point of beginning of the proposed pillar in the Parlor Vein, as above described, thence N. 5 degrees 15 minutes W. 120.25 feet to a point "U", thence N. 45 degrees 01 minute W. 163.36 feet to a point "V", thence N. 4 degrees 29 minutes W. 146.84 feet to a point "W", thence S. 86 degrees 17 minutes W. 403.31 feet to a point "X", said point being 60 feet, measured at right-angles, from the boundary line.

And also that a pillar be left in the Buck Mountain Vein on Harwood property of 100 feet in width along the boundary line; all in accordance with the lines drawn on the maps accompanying this report.

#### Article IV

Inasmuch as the question of building these dams for the protection of the properties has been in contemplation since the date of the discovery of the trespass, Aug. 28th, 1901, the Arbitrators direct that Calvin Pardee & Co. shall begin work at once and diligently prosecute the same to completion, at their own expense.

#### Article V

Since it is necessary that the carrying out of this award be done under supervision, the Arbitrators hereby appoint Mr. J. E. Alt-miller, as Inspector, who will see that the work is properly done; and, in case of difference of opinion between the parties interested, the points in question shall be referred for final decision to Mr. T. D. Jones, who has been appointed by Messrs. A. Pardee & Company, Calvin Pardee & Company and the Cranberry Improvement Company, as sole Arbitrator in the carrying out of the full intent of the questions embodied in this report.

Hazleton, Pa., Aug. 11th, 1906.

T. D. JONES,  
J. E. ANDERSON,  
WM. A. COCHRAN.  
Arbitrators

### Mine Foremen's Examinations

The annual examination of applicants for certificates of qualifications as Mine Foremen and Assistant Mine Foremen was held at the Pine Street School House, Hazleton, June 19 and 20. The Board was composed of the following members:

David J. Roderick, Inspector, Hazleton; E. L. Bullock, Superintendent, Audenried; Fred Henry, Miner, West Hazleton; Fred Young, Miner, Hazleton.

The following persons were recommended for certificates:

#### Mine Foremen

Jno. Mitchell, Lansford; Joseph McFadden, Freeland; Matthew Miller, Hazleton; Wm. B. Paisley, Hazleton; Robt. Robertson, Hazleton; Daniel Sube, Milnesville; Wm. T. Williams, Upper Lehigh; Frank Ansbach, Gowan; Thomas Argust, Beaver Meadow; John Chisnell, Hazleton; William Davis, Freeland; William Goldsworthy, Hazleton; Conrad Helwig, Hazleton; Patrick Dougherty, Hazleton.

#### Assistant Mine Foremen

John P. Davis, Lansford; James P. Griffith, Lansford; John S. McGeehan, Hazleton; Charles X. McGill, Freeland; Edward J. O'Donnell, Lansford; Robt. H. Jones, Lansford; John R. Davis, Lansford.

# Twelfth District

SCHUYLKILL COUNTY

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Mahanoy City, Pa., March 18, 1907

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Twelfth Anthracite District, for the year ending December 31, 1906.

The tables contain the statistics relative to production, number of employes, days worked, accidents, etc. The condition of the collieries is also reported.

Respectfully submitted,

P. C. FENTON,  
Inspector.



## SUMMARY OF STATISTICS

Number of collieries, .....	10
Number of mines, .....	14
Number of mines in operation, .....	14
Number of tons of coal shipped to market, .....	2,688,886
Number of tons used at mines for steam and heat, ....	321,601
Number of tons sold to local trade and used by employes.	42,310
Number of tons produced, .....	3,052,797
Number of persons employed inside of mines, .....	5,261
Number of persons employed outside, .....	2,769
Number of fatal accidents inside of mines, .....	22
Number of fatal accidents outside, .....	3
Number of non-fatal accidents inside of mines, .....	18
Number of non-fatal accidents outside, .....	2
Number of tons of coal produced per fatal accident in side, .....	138,764
Number of persons employed per fatal accident inside, ..	239
Number of persons employed per fatal accident outside,	923
Number of persons employed per non-fatal accident in- side, .....	292
Number of persons employed per non-fatal accident out- side, .....	1,385
Number of wives made widows, .....	12
Number of children orphaned, .....	41
Number of steam locomotives used outside, .....	11
Number of compressed air locomotives used inside, .....	12
Number of electric motors used inside, .....	4
Number of fans in use, .....	14
Number of gaseous mines in operation, .....	13
Number of non-gaseous mines in operation, .....	1
Number of new mines opened, .....	1

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company, .....	2,447,362
Lentz and Company, .....	363,961
Lehigh Valley Coal Company, .....	238,513
Price and Glenn Company, .....	2,961
Total, .....	<u>3,052,797</u>

## Production by Counties

Schuylkill, .....	<u>3,052,797</u>
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TABLE B. Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operations	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total								
Philadelphia and Reading Coal and Iron Company	1	5	6	14	2	16	293,546	4,219	2,376	6,595	354	792	300	1,188
Lentz and Company	1	1	2	2	1	3	181,980	632	242	874	316	316	316	316
Lehigh Valley Coal Company	8	8	16	2	2	4	119,226	402	141	543	30	30	291	291
Pine and Glen Company	1	1	2	18	1	19	169,399	5,261	2,769	8,030	239	923	292	1,285
Totals and averages for district	11	15	26	36	6	42	663,150	15,261	7,534	22,795	329	329	329	329

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....						2		1					3	13.63
Falls of slate, .....			2		1	1					2	1	7	31.81
Mine cars, .....	1							1	2				4	18.18
Explosions of gas and dust, .....												1	1	4.55
Premature blasts, .....			1								1		2	9.09
Falling into shafts, .....							1						1	4.55
Falling into slopes, etc., .....			1						1				2	9.09
Crushed at batteries, .....			1										1	4.55
Miscellaneous, .....			1										1	4.55
Totals, .....	1	1	5		1	3	1	2	2		3	2	22	100.00
Causes of Accidents Outside														
Cars, .....		1											1	33.33
Machinery, .....	1									1			2	66.67
Totals, .....	1	1								1			3	100.00
Grand totals inside and outside, .....	2	2	5		1	3	1	2	2	1	3	2	25	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, .....								1		1		2	4	22.22
Falls of slate, .....									1				1	5.56
Falls of roof, .....									1				1	5.56
Mine cars, .....								1					1	5.56
Explosions of gas and dust, .....						2		2		1			5	27.78
Explosions of powder and dynamite, .....							1				1		2	11.11
Premature blasts, .....							1						1	5.55
Machinery, .....							1						1	5.55
Miscellaneous, .....											1	1	2	11.11
Totals, .....						2	3	3	1	2	2	3	18	100.00
Causes of Accidents Outside														
Machinery, .....										1			1	50.00
Miscellaneous, .....			1										1	50.00
Totals, .....			1							1			2	100.00
Grand totals inside and outside, .....			1			2	3	3	1	3	2	3	20	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Fire bosses and assistants, .....									1			1
Miners, .....	1		3			2		1	2		2	13
Miners' laborers, .....	1	1			1	1	1					6
Company men, .....								1				1
All other employes, .....			1									1
Totals, .....	1	1	5		1	3	1	2	3		2	22
<b>Outside</b>												
Slatepickers (boys), .....										1		1
All other employes, .....	1	1										2
Totals, .....	1	1								1		3
Grand totals inside and outside, ...	2	2	5		1	3	1	2	3	1	3	25

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Miners, .....						2	2	4	1	2	1	2
Miners' laborers, .....											1	2
Drivers and runners, .....							1	1			1	1
All other employes, .....							1					1
Totals, .....						2	3	5	1	2	2	18
<b>Outside</b>												
Engineers and firemen, .....										1		1
All other employes, .....			1									1
Totals, .....			1							1		2
Grand totals inside and outside, ...			1			2	3	5	1	3	2	20



TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	..	..	..	..	..	..	..	..	1	1	..	1	2
English, .....	..	..	..	..	..	..	..	1	1	..	..	..	1
Welsh, .....	..	..	..	..	..	..	..	..	1	..	..	..	1
Irish, .....	1	2	2	..	..	1	..	1	1	..	2	..	9
Polish, .....	1	..	..	..	..	1	..	..	..	..	..	..	2
Italian, .....	..	..	2	..	1	1	..	1	..	..	1	1	7
Lithuanian, .....	..	..	1	..	..	..	1	..	..	..	..	..	2
Tyrolean, .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals, .....	2	2	5	..	1	3	1	2	3	1	3	2	25

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	..	..	..	..	..	..	1	1	..	1	..	..	3
Irish, .....	..	..	..	..	..	2	..	..	..	..	..	..	2
German, .....	..	..	..	..	..	..	..	..	1	..	..	..	1
Polish, .....	..	..	1	..	..	..	..	1	..	1	1	1	5
Slavonian, .....	..	..	..	..	..	..	..	1	1	..	..	1	2
Lithuanian, .....	..	..	..	..	..	1	3	..	..	..	1	1	6
Russian, .....	..	..	..	..	..	1	1	..	..	..	..	..	1
Totals, .....	..	..	1	..	..	2	3	5	1	3	2	3	30



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Ellangowan, .....	Schuylkill.	W. J. Richards.	Pottsville.	Reese Tasker, .....	Pottsville, .....	P. and R.
St. Nicholas, .....						
Suffolk, .....						
Tipton Hill, .....						
Tunnel Ridge, .....						
Madison City, .....						
North Mahanoy, .....						
Leontz and Co.	Schuylkill.	Edward Reese, .....	Mahanoy City, .....	James L. Reese, .....	Park Place, .....	Lehigh Valley
Park Place, .....						
Lehigh Valley Coal Co.	Schuylkill.	S. D. Warriner, .....	Wilkes-Barre, .....	Thomas Thomas, .....	Hazleton, .....	Lehigh Valley
Primrose, .....						
Price and Glenn Co.	Schuylkill.	W. H. Glenn, .....	Shenandoah, .....	Morgan W. Price, .....	Lost Creek, .....	Lehigh Valley
High Point, .....						

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.												
Ellingsworth, .....	{ Schuylkill..... }	298,742	37,600	487	336,229	218	1,217	4	2	12,225	36,100	96
St. Nicholas, .....		298,962	32,062	303	331,347	250	802	3	1	7,069	60,884	69
Suffolk, .....		277,388	32,367	1,294	298,449	246	838	4	4	7,873	21,982	86
Maple Hill, .....		475,432	32,740	.....	298,782	248	1,731	4	1	16,354	52,019	91
Tunnel Ridge, .....		310,137	41,735	.....	282,452	235	610	1	1	2,608	11,176	66
Manoy City, .....		351,075	41,284	30,510	400,524	237	674	2	2	5,629	13,893	79
North Mahanoy, .....		.....	.....	5,165	.....	.....	940	3	1	3,679	28,882	96
Totals, .....		2,143,764	265,849	37,740	2,447,362	.....	6,595	15	16	57,608	257,167	577
Lentz and Co.												
Park Place, .....	Schuylkill, .....	322,776	58,292	1,963	363,961	230	874	2	2	8,918	46,550	104
Lehigh Valley Coal Co.												
Primrose, .....	Schuylkill, .....	208,723	27,182	2,598	238,513	215	543	8	2	5,735	20,769	34
Price and Glenn Co.												
High Point, .....	Schuylkill, .....	2,613	348	.....	2,961	90	18	.....	.....	65	700	2
Grand totals, .....		2,638,986	321,601	42,310	3,062,797	.....	8,600	25	20	72,826	335,166	713

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co., .....	{ Schuylkill..... }	2,142,764	265,849	37,749	2,447,362	.....	6,595	15	16	57,608	257,157	577
Lentz and Co., .....		333,776	28,222	1,983	363,962	.....	874	2	2	6,918	44,526	177
Lehigh Valley Coal Co., .....		208,733	27,132	2,538	238,513	.....	543	8	2	5,735	20,759	109
Price and Glenn Co., .....		2,613	348	.....	2,961	.....	18	.....	.....	66	700	2
Totals, .....		2,683,886	321,601	42,310	3,052,797	.....	8,030	25	20	72,326	325,166	713



TABLE 2.—PART 2

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors		
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam										Air	Electric
Philadelphia and Reading Coal and Iron Co.,	Schuylkill	12	360	123	15,170	15,530	9	12	.....	115	23,422	25	42,159	9,729	1	9		
Leitz and Co.,		1	.....	12	3,250	3,250	1	.....	.....	32	3,280	3	4,800	.....	.....	.....		
Lehigh Valley Coal Co.,		1	.....	11	1,870	1,800	1	.....	4	5	1,600	1	1,430	1,440	1	2		
Price and Glenn Co.,		1	.....	1	1,100	100	.....	.....	.....	7	70	.....	.....	.....	.....	.....		
Totals,		12	360	148	20,320	20,680	11	12	4	171	28,382	29	48,340	11,200	2	11		

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Coal- fields	County	Inside										Outside										Grand total inside and outside	
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (days)	State pickers (men)	Bookkeepers and clerks	All other employees	Total outside		
Philadelphia and Reading Coal and Iron Co.																							
Ellangowan.....		1	1	9	250	198	54	1	1	125	101	765			9	77	113	19	6	266	452	1,377	
St. Nicholas.....		1	1	179	179	179	30	1	1	179	92	519			3	57	36	55	4	163	583	892	
Suffolk.....		1	1	211	412	412	82	6		179	112	538			6	74	38	19	4	188	500	888	
Maple Hill.....	Schuylkill	1	1	490	157	157	19			137	181	998			12	12	128	43	3	269	433	1,431	
Furned Ridge.....		1	1	6	133	91	44	1	3	50	162	438			12	35	28	11	3	134	238	716	
Mahanoy City.....		1	1	3	178	104	38	11	2	20	73	431			12	23	28	11	1	226	651	1,087	
North Mahanoy.....		2	1	6	178	91	36	11	4	83	119	530			10	50	67	67	5	213	410	940	
Totals.....		8	6	53	1,528	873	317	75	14	575	780	4,219		13	60	211	600	105	33	1,264	2,376	6,595	
Park Place.....	Schuylkill	2	2	7	218	182	35	1	8	89	58	682		2	1	16	41	32	53	5	89	242	874
Lehigh Valley Coal Co.																							
Primrose.....	Schuylkill	1	1	3	180	74	28	3	4		166	402		1	10	19	25	5	2	79	141	543	
Price and Glenn Co.																							
High Point.....	Schuylkill	1	1	3	4							8		1	1	1	4				3	10	18
Grand totals.....		12	8	67	1,965	1,113	380	79	26	664	947	5,241		3	16	86	275	661	253	40	1,425	2,769	8,030

TABLE 3.—Recapitulation

Names of Operators	County	Inside											Outside							Grand total inside and outside		
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks		All other employes	Total outside
Philadelphia and Reading Coal and Iron Co. Lentz and Co., Lehigh Valley Coal Co., Price and Glenn Co.,	Schuylkill	8	6	53	1,538	853	317	75	14	575	780	4,219	....	13	60	211	600	195	33	1,264	2,376	6,595
		2	2	7	248	182	35	1	8	89	58	632	2	1	16	44	32	53	5	89	242	874
		1	1	3	180	74	28	3	4	....	109	402	....	1	10	19	25	5	2	79	141	543
		1	....	....	3	4	....	....	....	....	....	8	1	1	....	1	4	....	....	3	10	18
Totals,		12	8	63	1,969	1,113	380	79	26	664	947	5,261	3	16	86	275	661	253	40	1,435	2,769	8,080



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	8 Charles Hasbaine, ....	Polish,.....	Miner, .....	22	S. ....	.....	.....	North Mahanoy, ..	Schuylkill,.....	Internally injured by jumping between mine cars. Died the next day at his home.
Feb.	15 Joseph Robins, .....	Italian,.....	Laborer, ...	23	S. ....	.....	.....	North Mahanoy, ..	Schuylkill,.....	Instantly killed by being caught in machinery, outside.
	8 John Misbeck, .....	Polish,.....	Loader, ....	40	M. ....	1	4	Ellargowan, .....	Schuylkill,.....	Instantly killed by falling off a railroad car, outside.
March	15 Anthony Tomolis, .....	Polish,.....	Laborer, ...	21	S. ....	.....	.....	Tunnel Ridge, ...	Schuylkill,.....	Instantly killed by a rush of rock.
	2 John Putnicki, .....	Polish,.....	Miner, .....	45	M. ....	1	3	Ellargowan, .....	Schuylkill,.....	Instantly killed by fall of rock.
	2 John Verkoskie, .....	Polish,.....	Miner, .....	25	S. ....	.....	.....	Primrose, .....	Schuylkill,.....	Instantly killed by fall of rock.
	8 Paul Pouchas, .....	Lithuanian, ..	Laborer, ...	33	M. ....	1	3	Primrose, .....	Schuylkill,.....	Instantly killed by falling down the slope.
	14 Frank Grublis, .....	Lithuanian, ..	Miner, .....	31	M. ....	.....	.....	Primrose, .....	Schuylkill,.....	Instantly killed by fall of slate.
	14 Guismino Capitanis, .....	Tyrolean,.....	Mucker, ....	28	S. ....	.....	.....	Primrose, .....	Schuylkill,.....	Instantly killed by a piece of timber falling down the shaft.
May	15 Sylvester Bugdano- vich, .....	Lithuanian, ..	Laborer, ...	28	S. ....	.....	.....	Maple Hill, .....	Schuylkill,.....	Instantly killed by fall of slate.
June	9 Michael Slovinski, ...	Lithuanian, ..	Miner, .....	40	M. ....	1	4	Ellargowan, .....	Schuylkill,.....	A piece of coal rolled on him. Died the same day.
	11 Nicholas Forla, .....	Italian,.....	Miner, .....	55	M. ....	1	6	Primrose, .....	Schuylkill,.....	Internally injured by fall of coal. Died the same day.
July	29 Paul Masitus, .....	Polish,.....	Laborer, ...	21	S. ....	.....	.....	St. Nicholas, ....	Schuylkill,.....	Internally injured by fall of slate. Died next day.
July	2 Guido Stanko, .....	Tyrolean,.....	Laborer, ...	18	S. ....	.....	.....	Primrose, .....	Schuylkill,.....	Instantly killed by falling down coal shaft.
Aug.	7 Con. Domalavice, .....	Lithuanian, ..	Miner, .....	39	S. ....	.....	.....	Maple Hill, .....	Schuylkill,.....	Internally injured by a fall of coal. Died same day.
	9 James Bannon, .....	Irish,.....	Road-clean- er, .....	60	S. ....	.....	.....	Primrose, .....	Schuylkill,.....	Internally injured by being run over by a trip of mine cars. Died at State Hospital August 11.
Sept.	13 John Thwaite, .....	English,.....	Fire boss, ..	58	M. ....	1	.....	Maple Hill, .....	Schuylkill,.....	Instantly killed by being run over by mine car.
	13 Patra Brisba, .....	Polish,.....	Miner, .....	24	M. ....	1	2	Maple Hill, .....	Schuylkill,.....	Instantly killed by being run over by trip of cars.
	15 John Llewellyn, .....	Welsh,.....	Miner, .....	32	M. ....	1	2	St. Nicholas, ....	Schuylkill,.....	Instantly killed by falling down empty breast.



Oct	30	John Ward, .....	American,...	Slate picker, 14	S. 1	7	Ellangowan, .....	Schuylkill, .....	Instantly killed by being caught in machinery. Dusted.
Nov.	6	Paul Morba, .....	Polish, .....	Miner, .....	M. 1	7	Park Place, .....	Schuylkill, .....	Instantly killed by premature blast.
	22	John Crush, .....	Polish, .....	Miner, .....	M. 1	...	Park Place, .....	Schuylkill, .....	Instantly killed by fall of slate.
	27	Joseph Namara, .....	Lithuanian, .....	Laborer, .....	S. 1	...	St. Nicholas, .....	Schuylkill, .....	Instantly killed by fall of slate.
Dec.	1	Benedict Serrum's, .....	Lithuanian, .....	Miner, .....	M. 1	8	North Mahanoy, ..	Schuylkill, .....	Instantly killed by a fall of top slate.
	19	Charles Frye, .....	American, .....	Miner, .....	M. 1	7	Primrose, .....	Schuylkill, .....	Burned by gas. Died next day at State Hospital.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
March 5	Ylle Obrush, .....	Polish.....	Laborer, .....	20	S.	St. Nicholas, .....	Schuykill.....	Leg broken by a piece of frozen coal rolling on him while loading stock coal. Outside.
June 27	Alex. McDonald, .....	Irish.....	Miner, .....	40	M.	Maple Hill, .....	Schuykill.....	Burned by gas.
July 27	Edward McDonald, .....	Irish.....	Miner, .....	36	S.	Maple Hill, .....	Schuykill.....	Burned by gas.
July 27	William Kosecavage, .....	Russian.....	Miner, .....	28	M.	Primrose, .....	Schuykill.....	Injured by an explosion of powder.
July 23	Yacob Stankcavage, .....	Lithuanian.....	Miner, .....	16	M.	Suffolk, .....	Schuykill.....	Injured by being caught in machinery.
Aug. 30	Howard Reese, .....	American.....	Oilier, .....	32	S.	Mahanoy City, .....	Schuykill.....	Caught between mine car and prop.
Aug. 3	William Rooney, .....	American.....	Driver, .....	20	S.	Primrose, .....	Schuykill.....	Injured by a piece of rock rolling on him.
Aug. 13	Joseph Weoshes, .....	Polish.....	Miner, .....	32	M.	Elangowan, .....	Schuykill.....	Leg injured by a piece of coal.
Aug. 13	William Micrki, .....	Lithuanian.....	Miner, .....	27	S.	Maple Hill, .....	Schuykill.....	Burned by gas.
Aug. 31	Anthony Gidgnus, .....	Lithuanian.....	Miner, .....	29	M.	Maple Hill, .....	Schuykill.....	Burned by gas.
Sept. 31	George Masses, .....	Lithuanian.....	Miner, .....	22	M.	Maple Hill, .....	Schuykill.....	Injured by a piece of slate falling on him.
Oct. 19	Paul Dnalvenskey, .....	Slavonian.....	Miner, .....	35	M.	Mahanoy City, .....	Schuykill.....	Hand injured under locomotive wheels while putting sand on the rails. Outside.
Oct. 1	Harry Frost, .....	American.....	Locomotive engin- eer, .....	26	M.	Elangowan, .....	Schuykill.....	side.
Nov. 25	Harry Esrot, .....	German.....	Miner, .....	38	M.	North Mahanoy, .....	Schuykill.....	Leg broken by fall of coal.
Nov. 27	John Smith, .....	Polish.....	Miner, .....	46	M.	Suffolk, .....	Schuykill.....	Burned by gas.
Nov. 1	Anthony Markales, .....	Lithuanian.....	Miner, .....	36	S.	Tunnel Ridge, .....	Schuykill.....	Hands and face burned by powder.
Nov. 24	Joe Robcavage, .....	Polish.....	Laborer, .....	26	S.	Park Place, .....	Schuykill.....	Leg broken by a stick of timber rolling on him.
Dec. 3	Eart. Vasslas, .....	Polish.....	Laborer, .....	35	M.	Suffolk, .....	Schuykill.....	Leg broken by a stick of timber falling on him.
Dec. 13	John Sobick, .....	Lithuanian.....	Miner, .....	45	M.	Suffolk, .....	Schuykill.....	Leg broken by fall of coal.
Dec. 14	Frank Barton, .....	Slavonian.....	Miner, .....	29	M.	Park Place, .....	Schuykill.....	Leg broken by fall of coal.

## FATAL ACCIDENTS

### Falls of Coal, Slate and Roof

June 9, Ellangowan, Michael Slovinskis, Lithuanian, miner, was fatally injured by a piece of coal falling on him. He died same day.

June 11, Primrose, Nicholas Forba, Italian, miner, was internally injured by fall of coal while working at face of breast. He died same day.

August 7, Maple Hill, Con. Domalavice, Lithuanian, miner, was internally injured by fall of coal while working at face of breast. He died same day.

February 15, Tunnel Ridge, Anthony Tomolis, Polish, laborer, was instantly killed by a rush of rock at the battery.

March 2, Ellangowan, John Putuskie, Polish, miner, was instantly killed by fall of rock while working in heading.

March 14, Primrose, Frank Grublis, Lithuanian, miner, was instantly killed by fall of slate while working at face of gangway. He should have taken it down as he had been instructed to do.

May 15, Maple Hill, Sylvester Bugdanovich, Lithuanian, laborer, was instantly killed by fall of slate while working at face of breast.

June 29, St. Nicholas, Paul Masitus, Polish, laborer, was internally injured by fall of slate. He was told by the miner not to go under it. He died next day.

November 22, Park Place, John Crush, Polish, miner, was instantly killed by fall of slate while loading a buggy at face of breast.

November 27, St. Nicholas, Joseph Namara, Lithuanian, laborer, was instantly killed by fall of slate. He had been told by the miner not to go under it.

December 1, North Mahanoy, Benedict Serrunis, Lithuanian, miner, was instantly killed by fall of slate while loading a buggy at the face of breast.

### Falling Down Shafts, Slopes and Manways

March 8, Primrose, Paul Pouchas, Lithuanian, laborer, was instantly killed by falling down tender slope. He was being hoisted to the surface, and when near the landing, stood up, his head striking the timber, which caused him to fall off the car and down the slope.

July 2, Primrose, Guido Stanko, Tyrolean, laborer, was instantly killed by falling down a shaft. He was sent for tools and in some unknown manner fell into the shaft. It is supposed that his light went out, and, in trying to find the way back, he got into the opening.

September 15, St. Nicholas, John Llewellyn, Welsh, miner, was instantly killed by falling down empty breast. He was starting some loose coal, when the prop that supported him gave way.

### Miscellaneous

March 14, Primrose, Guistino Capitanis, Tyrolean, mucker, was instantly killed by a piece of timber falling down shaft. He and others were working at the bottom of the shaft when the timber fell a distance of fifty feet. It was loosened by blasts fired during sinking operation.

### Caught by Machinery, Outside

January 15, North Mahanoy, Joseph Robins, Italian, laborer, was instantly killed by being caught in the scraper line. He was told to clean under the breaker. There is a fence three feet high along the line, and he must have climbed over it.

October 30, Ellangowan, John Ward, American, slate picker, was instantly killed by being caught in the elevators. He had left his place of work, for some cause unknown, and on his way back he was caught in the machinery. No one saw him until after his death. The machinery is well protected by being fenced.

### Cars

January 8, North Mahanoy, Charles Hasbeine, Polish, miner, was fatally injured by falling under the car from the dumper. He died the next day at his home.

August 9, Primrose, James Bannon, Irish, road cleaner, was cleaning a turnout when an electric motor came along with an empty trip of cars. He stepped right in front of the trip, thinking it was going the other way. His left leg was badly mangled. He died at the State Hospital, August 11.

September 13, Maple Hill, John Thawaite, English, fire boss, was instantly killed by being run over by a loaded car while he was crossing from one gangway to another.

September 13, Maple Hill, Patra Brisba, Polish, miner, was instantly killed by being run over by a trip of mine cars. He was signaling, by a bell, at the bottom of the underground slope. The clevis of the trip broke when about 25 feet up the slope. The trip came back and he was run over by it while trying to get away.

February 8, Ellangowan, John Mishock, loader, was instantly killed while loading a Philadelphia and Reading railroad car. The other car loader went up the trail track and started another car down towards the breaker. It bumped the one on which Mishock was standing, and he fell backwards off the car, breaking his neck.

### Explosions of Gas, Powder and Dynamite

December 19, Primrose, Charles Frye, American, miner, was fatally injured by an explosion of gas. He died next day at the State Hospital. He went into an abandoned breast with his naked lamp, not knowing that a fall had occurred, and closed the top headings. This fall of rock and coal set free an unexpected quantity of gas. The ventilation in this section of the mine is excellent and no doubt the workmen sometimes neglected to take the necessary precautions. No abandoned portion of a mine should be examined, whether generating explosive gas or not, with an open light, but with a well tested safety lamp. Under the conditions existing when the above accident occurred the most experienced workman might have been misled.

### Premature Blasts

March 2, Primrose, John Verokoskie, Polish, miner, was instantly killed by premature blast. He had fired two blasts in the chute; one

went off, the other squib hung fire and went off just as he reached the face.

November 6, Park Place, Paul Morba, Polish, miner, was instantly killed by premature blast. He had drilled a hole in the pillar and placed a squib ready to fire, but a driver was passing at the time, so he did not fire it. While waiting, he unknowingly lit the squib with the lamp that was on his head. The blast went off before he could reach a place of safety.

## CONDITION OF COLLIERIES

### PHILADELPHIA AND READING COAL AND IRON COMPANY

Ellangowan Colliery—Ventilation and road beds in good condition.

Maple Hill Colliery.—Ventilation and road beds in good condition.

Suffolk Colliery—Ventilation and road beds in good condition.

St. Nicholas Colliery—Ventilation and road beds in good condition.

Tunnel Ridge Colliery—Ventilation and road beds in good condition.

Mahanoy City Colliery.—Ventilation and road beds in good condition.

North Mahanoy Colliery—Ventilation and road beds in good condition.

### LENTZ AND COMPANY

Park Place Colliery—Ventilation and road beds in fair condition.

### LEHIGH VALLEY COAL COMPANY

Primrose Colliery—Ventilation and road beds in fair condition.

### PRICE AND GLENN COMPANY

High Point Colliery—This is a new colliery. It has natural ventilation, the openings being only a short distance east and west of the slope.

## IMPROVEMENTS

### PHILADELPHIA AND READING COAL AND IRON COMPANY

#### Maple Hill Colliery

An underground slope on the Buck Mountain vein completed, distance 1,550 feet. A tunnel to top split vein first level, from West Buck Mountain Gangway completed, distance 535 feet.

#### St. Nicholas Colliery

A 12 inch and 18 inch by 14 by 18 inch Jeanesville wash water pump, resting on a concrete foundation, was installed.

A tunnel to top split vein, from west bottom split gangway, third level, south dip, distance 88 feet.



### Tunnel Ridge Colliery

A tunnel to Buck Mountain vein from East Skidmore gangway, second level north dip, was completed, distance 138 feet.

A tunnel to bottom split vein from East Skidmore gangway, second level, north dip, was completed, distance 73 feet.

A tunnel to Buck Mountain vein from East Seven Foot gangway, third level, south dip, 99 feet.

### North Mahanoy Colliery

A tunnel was driven to the Primrose vein on 40 degrees pitch, distance 134 feet.

A tunnel from bottom split, to the Skidmore vein, distance 21 feet.

### LENTZ AND COMPANY

#### Park Place Colliery

A tunnel from Buck Mountain second level, to the Seven Foot and Skidmore veins, distance 125 feet.

At foot of No. 4 Slope a turnout was driven through rock, distance 150 feet.

A rope haulage has been installed, for the purpose of hauling the coal from No. 4 Slope over the surface, distance 7,660 feet.

### LEHIGH VALLEY COAL COMPANY

#### Primrose Colliery

A shaft has been sunk from the second level a distance of 200 feet, at the bottom of which tunnels are being driven to the following seams: Bottom split, Skidmore, Seven Foot and Buck Mountain.

A trial slope has been sunk from the second level, in the Buck Mountain vein, distance 275 feet.

### Mine Formen's Examination

The examination of applicants for certificates of qualification as Mine Formen and Assistant Mine Foremen was held at Pottsville, in May, and the following persons were recommended for certificates:

#### Mine Foremen

William Southall, Saint Nicholas.

#### Assistant Mine Foremen

Archibald Hodgert, Gilberton; William Ecker, Mahanoy City; Lewis Jones, Saint Nicholas; Henry Hewitt, Saint Nicholas.

# Thirteenth District

SCHUYLKILL COUNTY

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Shenandoah, Pa., March 18, 1907

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Thirteenth Anthracite District for the year ending December 31, 1906.

Respectfully Submitted,

A. B. LAMB,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	17
Number of mines, .....	18
Number of mines in operation, .....	18
Number of tons of coal shipped to market, .....	2,631,585
Number of tons used at mines for steam and heat, .....	368,727
Number of tons sold to local trade and used by employes, .....	52,664
Number of tons produced, .....	3,052,976
Number of persons employed inside of mines, .....	5,181
Number of persons employed outside, .....	3,448
Number of fatal accidents inside of mines, .....	24
Number of fatal accidents outside, .....	5
Number of non-fatal accidents inside of mines, .....	38
Number of non-fatal accidents outside, .....	9
Number of tons of coal produced per fatal accident inside, .....	127,207
Number of persons employed per fatal accident inside, ..	216
Number of persons employed per fatal accident outside, ..	690
Number of persons employed per non-fatal accident inside, .....	136
Number of persons employed per non-fatal accident outside, .....	383
Number of wives made widows, .....	12
Number of children orphaned, .....	16
Number of steam locomotives used inside of mines, .....	1
Number of steam locomotives used outside, .....	24
Number of compressed air locomotives used inside, .....	6
Number of fans in use, .....	21
Number of gaseous mines in operation, .....	16
Number of non-gaseous mines in operation, .....	2

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TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal Company, .....	1,836,528
Lehigh Valley Coal Company, .....	461,957
Susquehanna Coal Company, .....	250,421
Thomas Colliery Company, .....	143,299
Cambridge Coal Company, .....	56,927
Brookwood Coal Company, .....	51,523
Gerber and Seaman, .....	40,933
Brighton Coal Company, .....	94,372
H. H. Smith and Company, .....	83,921
Oxford Coal Company, .....	33,095
Total, .....	3,052,976

Production by Counties

Schuylkill, .....	3,052,976
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## REPORT OF THE DEPARTMENT OF MINES

Off. Doc.

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co., . . . . .	16	2	18	25	4	29	114,783	73,461	3,715	2,152	5,867	282	1,076	148	538
Lehigh Valley Coal Co., . . . . .	3	1	4	10	1	11	153,986	46,196	656	478	1,134	219	237	68	478
Susquehanna Coal Co., . . . . .	2	1	3	1	1	2	125,210	150,421	439	237	607	215	237	439	237
Thomas Colliery Co., . . . . .	2	1	3	1	2	3	71,649	143,299	160	173	333	80	237	166	86
Cambridge Coal Co., . . . . .	1	1	2	1	1	2	40,933	56,927	102	35	137	70	102	102	102
Gerber and Seaman, . . . . .	1	1	2	1	1	2	40,933	56,927	102	35	137	70	102	102	102
Brighton Coal Co., . . . . .	1	1	2	1	1	2	40,933	56,927	102	35	137	70	102	102	102
H. H. Smith and Co., . . . . .	1	1	2	1	1	2	40,933	56,927	102	35	137	70	102	102	102
Oxford Coal Co., . . . . .	1	1	2	1	1	2	40,933	56,927	102	35	137	70	102	102	102
Miscellaneous companies, . . . . .	1	1	2	1	1	2	40,933	56,927	102	35	137	70	102	102	102
Totals and averages for district, . . . . .	24	5	29	38	9	47	127,207	80,341	5,181	3,448	8,629	216	439	138	383



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, .....			1				2	1	1	1	2	10	41.67	
Mine cars, .....			1			1					1	3	12.50	
Explosions of gas and dust, .....			1									1	4.16	
Explosions of powder and dynamite, .....					7							7	29.17	
Miscellaneous, .....								1			1	3	12.50	
Totals, .....			3		7	1	2	2	1	1	4	3	24	100.00
Causes of Accidents Outside														
Cars, .....	1								1		1	3	60.00	
Machinery, .....												2	40.00	
Totals, .....	1								1		1	2	5	100.00
Grand totals inside and outside, .....	1		3		7	1	2	2	2	1	5	5	29	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....	1	...	2	...	1	1	2	1	...	1	1	...	10	26.32
Falls of slate, .....	1	...		...			1	...				...	2	5.26
Falls of roof, .....	1	1	...	...	1	...						...	3	7.90
Mine cars, .....						1	2	2	1	...		...	3	7.90
Explosions of gas and dust, .....	4	...	1	...		1	2	...		2	1	...	11	28.95
Explosions of powder and dynamite, .....					3			...				...	3	7.89
Falling into slopes, etc., .....	2	...		...				...				...	2	5.26
By mules, .....						1	...	...				...	1	2.63
Miscellaneous, .....		2	...	...				...				1	3	7.89
Totals, .....	9	3	3	...	5	3	5	3	1	3	2	1	38	100.00
Causes of Accidents Outside														
Cars, .....												1	1	11.11
Machinery, .....		1	...	...				1	...				2	22.22
Miscellaneous, .....	2	...	2	...	1	1	...	1	...				6	66.67
Totals, .....	2	1	2	...	1	1	...	1	...			1	9	100.00
Grand totals inside and outside, .....	11	4	5	...	6	4	5	4	1	3	2	2	47	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....			1		4		2	1	1		2	2	13
Miners' laborers, .....			1			1				1	1		4
Drivers and runners, .....			1		1						1	1	4
Company men, .....								1					3
All other employes, .....								1					1
Totals, .....			3		7	1	2	2	1	1	4	3	24
Outside													
Slatepickers (boys), .....												1	1
All other employes, .....	1								1		1	1	4
Totals, .....	1								1		1	2	5
Grand totals inside and outside, ...	1		3		7	1	2	2	2	1	5	5	29

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Fire bosses and assistants, .....					1								1
Miners, .....	7	2	3		2	2	5	1	1	3	2		28
Miners' laborers, .....	2	1						1					4
Drivers and runners, .....					1	1							2
Company men, .....								1					1
All other employes, .....					1						1		3
Totals, .....	9	3	3		5	3	5	3	1	3	2	1	38
Outside													
Blacksmiths and carpenters, .....			2		1								3
Slatepickers (boys), .....						1		1					2
All other employes, .....	2	1									1		4
Totals, .....	2	1	2		1	1		1			1		9
Grand totals inside and outside, .....	11	4	5		6	4	5	4	1	3	2	2	47

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....	1	1	1	1	1	1	1	1	1	1	1	1
Welsh, .....	1	1	1	1	1	1	1	1	1	1	1	1
Polish, .....	1	1	1	1	1	1	1	1	1	1	1	1
Hungarian, .....	1	1	1	1	1	1	1	1	1	1	1	1
Italian, .....	1	1	1	1	1	1	1	1	1	1	1	1
Lithuanian, .....	1	1	1	1	1	1	1	1	1	1	1	1
Russian, .....	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1

TABLE II.—Nationality of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....	1	1	1	1	1	1	1	1	1	1	1	1
Irish, .....	1	1	1	1	1	1	1	1	1	1	1	1
German, .....	1	1	1	1	1	1	1	1	1	1	1	1
Polish, .....	1	1	1	1	1	1	1	1	1	1	1	1
Hungarian, .....	1	1	1	1	1	1	1	1	1	1	1	1
Lithuanian, .....	1	1	1	1	1	1	1	1	1	1	1	1
Russian, .....	1	1	1	1	1	1	1	1	1	1	1	1
Greek, .....	1	1	1	1	1	1	1	1	1	1	1	1
Totals, .....	1	1	1	1	1	1	1	1	1	1	1	1

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Philadelphia and Reading Coal and Iron Co., Shenandoah City, .....	Shaft, .....	Gaseous, .....	Fan, .....	68.8	6	4½	75	2	Guibal, ...	{ Air, ..... Steam, ... }	125,000	120,000	135,000	574	209
Draper, .....	Slope, .....	Gaseous, .....	Fans, .....	{ 18 12 12 4 4 4 }	{ 6 6 6 4 4 4 }	{ 4½ 4½ 4 4 4 4 }	{ 82 90 140 }	{ 1 3-5 ½ }			134,023	115,804	130,587	562	236
Turkey Run, .....	Slope, .....	Gaseous, .....	Fan, .....	15	4	4¾	140	1½	Guibal, ...	{ Steam, ... Steam, ... Steam, ... Steam, ... Steam, ... Steam, ... Steam, ... }	146,560	115,000	100,000	565	204
Gilberton, .....	Slope, .....	Gaseous, .....	Fan, .....	21	7	6	70	1-10			83,900	75,000	95,672	343	138
Knickerbocker, .....	Slope, .....	Gaseous, .....	Fan, .....	21	6.5	6	95	1-6			69,340	60,310	69,310	285	123
Peston Run, .....	Slope, .....	Gaseous, .....	Fan, .....	21	7	6½	75	1-10			104,000	75,000	113,000	276	101
West Shenandoah, .....	Slope, .....	Gaseous, .....	Fan, .....	18	6	4½	90	¾			86,072	88,351	103,200	400	160
Kohinoor, .....	Shaft, .....	Gaseous, .....	Fan, .....	18	6	4½	75	¾			88,000	84,925	103,205	290	279
Indian Ridge, .....	Shaft, .....	Gaseous, .....	Fan, .....	18	6	4½	75	¾			169,465	88,119	171,792	440	200
Lehigh Valley Coal Co., Packer No. 2, .....	Slope, .....	Gaseous, .....	Fan, .....	20	6	5	48	2-10	Guibal, .....	{ Steam, ... Steam, ... }	93,500	88,500	94,000	187	473
Packer No. 3, .....	Slope, .....	Gaseous, .....	Fan, .....	18	6	4½	60	7-10			106,680	70,000	67,000	254	275
Packer No. 4, .....	Slope, .....	Gaseous, .....	Fan, .....	20	6	4½	60	7-10	Guibal, .....	{ Steam, ... Steam, ... }	61,700	45,200	63,551	215	210
Susquehanna Coal Co., William Penn, .....	Shaft, .....	Gaseous, .....	Fans, .....	{ 18 18 12 }	{ 7 7 5 }	{ 4½ 4½ 4 }	{ 90 90 100 }	{ 1.8 1.8 .8 }			151,125	88,576	175,470	436	206
Thomas Colliery Co., Kehley's Run, .....	Slope, .....	Gaseous, .....	Fan, .....	14	5	4	.....	.....	Guibal, .....	{ Steam, ... Steam, ... }	74,350	38,119	75,089	169	139
Cambridge Coal Co., Cambridge, .....	Drift, .....	Non-gas, .....	Fan, .....	.....	.....	.....	.....	.....			35,065	36,006	40,000	102	294

Brookwood Coal Co.		Slope,....		Gaseous,....		Fan,.....		.....		40		$\frac{1}{2}$		Gubal, .....		Steam,...		12,000		10,000		14,000		46		217	
Stanton, .....		Slope,....		Gaseous,....		Fan,.....		.....		40		$\frac{1}{2}$		Gubal, .....		Steam,...		12,000		10,000		14,000		46		217	
Gerber and Seaman		Slope,....		Gaseous,....		Fan,.....		.....		70		$\frac{1}{2}$		Gubal, .....		Steam,...		16,000		14,000		18,000		70		206	
Furnace, .....		Slope,....		Gaseous,....		Fan,.....		.....		70		$\frac{1}{2}$		Gubal, .....		Steam,...		16,000		14,000		18,000		70		206	



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co. Shenandoah City, .....	Schuylkill,.....	W. J. Richards, ..	Pottsville, .....	Reese Tasker, .....	Pottsville, .....	P. and R.
Traper, Run, .....						
Thicket, Run, .....						
Gilbert, Run, .....						
Gilbertsbrook, .....						
Easton Run, .....						
West Shenandoah, .....						
Kohinoor, .....						
Indian Ridge, .....						
Plank Ridge washery, .....						
Lehigh Valley Coal Co. Packer No. 2, .....						
Packer No. 3, .....						
Packer No. 4, .....						
William Penn, .....						
Susquehanna Coal Co. Thomas Colliery Co. Kehley's Run, .....	Schuylkill,.....	Robert A. Quin, ..	Wilkes-Barre, .....	William Auman, ..	Centralia, .....	Lehigh Valley
Cambridge Colliery Co. Cambridge Coal Co. Brookside Coal Co. Santon, .....	Schuylkill,.....	W. G. Thomas, ..	Hazleton, .....	D. H. Levan, .....	Shenandoah, .....	P. and R.
Gerber and Seaman Furnace, .....	Schuylkill,.....	D. R. James, .....	Shenandoah, .....	D. R. James, .....	Shenandoah, .....	P. and R.
Brighton Coal Co. Brighton washery, .....	Schuylkill,.....	W. G. Thomas, ..	Hazleton, .....	W. G. Thomas, ..	Hazleton, .....	P. and R.
H. H. Smith and Co. Hudson washery, .....	Schuylkill,.....	M. A. Gerber, .....	Tamaqua, .....	M. H. Gerber, .....	Tamaqua, .....	P. and R.
Oxford Coal Co. Oxford washery, .....	Schuylkill,.....	Henry Meyers, ..	Minersville, .....	R. R. Williams, ..	Frackville, .....	P. and R.
	Schuylkill,.....	W. G. Thomas, ..	Hazleton, .....	G. J. Thomas, ..	Shaft, .....	P. and R.
	Schuylkill,.....	W. G. Thomas, ..	Hazleton, .....	G. J. Thomas, ..	Shaft, .....	P. and R.



TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Stanton, .....	Brookwood Coal Co.	49,070	2,453	.....	51,523	189	112	.....	.....	170	5,903	10
Furnace, .....	Gerber and Seaman	35,383	5,550	.....	40,933	222	131	1	.....	100	17,785	12
Brighton washery, .....	Brighton Coal Co.	87,333	7,039	.....	94,372	244	102	.....	1	.....	.....	4
Hudson washery, .....	H. H. Smith and Co.	79,925	3,496	.....	83,921	188	60	1	.....	.....	.....	.....
Oxford washery, .....	Oxford Coal Co.	31,097	1,880	18	33,395	100	86	1	.....	1	1,975	4
Grand totals, .....		2,631,585	368,727	52,664	3,052,976	.....	8,629	29	47	40,179	391,464	675

TABLE 2.—Recapitulation

Philadelphia and Reading Coal and Iron Co., .....	1,566,063	298,814	41,031	1,536,528	5,867	18	29	26,982	288,193	446
Lenigh Valley Coal Co., .....	395,219	64,996	1,742	461,957	1,134	3	11	5,035	42,558	105
Susquehanna Coal Co., .....	210,767	37,296	2,358	250,421	667	3	2	5,001	24,800	60
Thomas Colliery Co., .....	123,971	14,700	4,628	143,299	333	2	3	1,375	6,950	24
Brighton Coal Co., .....	87,333	7,039	.....	94,372	102	.....	1	.....	.....	4
H. H. Smith and Co., .....	79,925	3,496	.....	83,921	60	1	1	.....	.....	.....
Miscellaneous companies, .....	168,277	11,896	2,305	182,478	466	2	1	1,183	28,963	35
Totals, .....	2,631,585	368,727	52,664	3,052,976	8,629	29	47	40,179	391,464	675

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	4	129	130	15,360	15,480	11	6	141	21,372	22	31,360	10,480	1	12
Lehigh Valley Coal Co.,		.....	.....	130	4,360	4,360	4	.....	61	13,128	8	6,665	2,370	1	.....
Susquehanna Coal Co.,		.....	.....	13	1,850	1,850	1	.....	13	1,585	1	1,500	800	.....	.....
Thames Colliery Co.,		.....	.....	6	900	900	1	.....	3	380	2	3,500	600	.....	.....
Cambridge Coal Co.,		.....	.....	3	200	200	.....	.....	4	180	.....	.....	.....	.....	.....
Brookwood Coal Co.,		.....	.....	3	625	625	2	.....	1	153	.....	.....	.....	.....	.....
Grier and Seaman,		1	15	8	940	215	.....	.....	8	130	1	300	150	.....	.....
Erigena Coal Co.,		.....	.....	8	200	900	3	.....	2	60	.....	1,000	1,000	.....	.....
H. H. Smith and Co.,		.....	.....	.....	375	375	1	.....	2	273	.....	.....	.....	.....	.....
Oxford Coal Co.,		2	200	4	500	700	1	.....	3	180	.....	.....	.....	.....	.....
Totals,		7	235	187	25,310	25,645	25	6	275	38,467	23	43,885	15,690	2	12

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Boys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employees	Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill	1	1	5	231	162	45	10	3	35	77	574	1	1	1	9	13	310	50	1	152	821
Shenandoah City.		1	1	3	263	175	36	14	1	183	180	502	1	1	1	8	20	68	30	1	153	280
Draper.		1	1	1	80	181	29	14	1	114	190	565	1	1	1	8	20	68	30	1	153	320
Turkey Run.		1	1	1	63	95	25	17	1	111	162	333	1	1	1	8	20	68	30	1	153	320
Gilberton.		1	1	1	66	96	17	13	1	111	162	333	1	1	1	8	20	68	30	1	153	320
Knickerbocker.		1	1	1	65	98	14	11	1	111	162	333	1	1	1	8	20	68	30	1	153	320
Easton Run.		1	1	1	127	101	18	11	1	111	162	333	1	1	1	8	20	68	30	1	153	320
West Shenandoah.		1	1	1	127	101	18	11	1	111	162	333	1	1	1	8	20	68	30	1	153	320
Kohinoor.		1	1	1	117	98	33	6	4	102	15	440	1	1	1	1	11	11	11	1	51	71
Indian Ridge.		1	1	1	117	98	33	6	4	102	15	440	1	1	1	1	11	11	11	1	51	71
Plank Ridge washery.		1	1	1	117	98	33	6	4	102	15	440	1	1	1	1	11	11	11	1	51	71
Totals.		9	7	43	1,614	919	211	53	17	685	694	3,715	16	16	69	216	507	100	34	1,150	2,152	5,867
Lehigh Valley Coal Co.	Schuylkill	1	1	4	62	31	13	3	1	1	70	187	1	1	1	3	13	1	1	1	23	50
Packer No. 2.		1	1	4	53	25	21	1	1	1	85	254	1	1	1	4	1	1	1	46	58	
Packer No. 3.		1	1	1	87	37	16	1	6	1	63	215	1	1	1	2	10	42	20	5	238	312
Packer No. 4.	1	1	1	290	140	90	13	17	218	218	656	1	1	1	29	58	42	20	7	317	1,134	
Totals.		4	2	12	290	140	90	13	17	218	218	656	1	1	1	29	58	42	20	7	317	1,134
Susquehanna Coal Co.	Schuylkill	1	1	6	160	62	80	3	7	105	6	430	1	1	1	20	27	65	12	7	104	287
William Penn.		1	1	6	160	62	80	3	7	105	6	430	1	1	1	20	27	65	12	7	104	287
Thomas Colliery Co.	Schuylkill	1	1	2	75	31	8	3	4	26	10	160	1	1	1	15	15	10	2	2	80	173
Kohler's Run.		1	1	2	75	31	8	3	4	26	10	160	1	1	1	15	15	10	2	2	80	173



Cambridge Coal Co.	1	1	38	45	4	1	.....	9	2	102	1	2	6	5	3	1	17	35	137
Cambridge, .....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ereckwood Coal Co.	1	.....	8	14	2	.....	.....	10	12	48	1	2	8	18	4	.....	28	64	112
Stanton, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gerber and Seaman	1	.....	1	38	17	3	.....	2	8	70	1	1	8	20	.....	1	15	61	131
Furnace, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brighton Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brighton washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
H. H. Smith and Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hudson washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oxford Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oxford washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand totals, .....	10	10	68	1,233	1,258	583	73	47	543	942	5,181	8	28	149	386	731	207	57	1,872
																			3,448
																			8,629

TABLE 3.—Recapitulation

Philadelphia and Reading	9	1	46	1,014	949	241	53	17	685	694	3,715	.....	16	69	216	507	160	34	1,150	2,152	5,867
Lehigh Valley Co., .....	4	2	12	240	140	50	13	17	.....	218	656	.....	1	4	20	58	42	20	317	478	1,134
Susquehanna Coal Co., .....	1	.....	5	160	62	80	3	1	105	6	430	1	1	20	27	65	12	7	104	237	667
Thomas Colliery Co., .....	1	.....	2	75	31	8	3	4	23	10	160	1	1	13	15	60	9	2	80	173	333
Brighton Coal Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
H. H. Smith and Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous companies, .....	1	1	2	84	76	9	1	2	27	11	220	3	4	12	31	63	11	5	36	102	102
Totals, .....	10	10	68	1,233	1,258	583	73	47	843	942	5,181	8	28	149	386	761	207	57	1,872	3,448	8,629

TABLE 3.—PART 2

Number of Days Worked in Breaker

Names of Operators and Collieries	County	Number of Days Worked in Breaker											
		January	February	March	April	May	June	July	August	September	October	November	December
Philadelphia and Reading Coal and Iron Co.	Schuylkill.....	24	21	25	.....	8	25	20	26	19	25	22	21
Shenandoan City.....		24	24	24	.....	11	26	19	26	19	25	21	22
Draper.....		21	21	21	.....	10	22	18	23	17	23	21	20
Turkey Run.....		21	21	21	.....	12	22	15	23	17	22	20	19
Gilberton.....		23	24	25	.....	14	22	20	26	19	26	22	22
Knickerbocker.....		23	24	26	.....	17	25	20	26	19	26	22	22
Easton Run.....		23	24	26	.....	10	22	18	23	17	23	21	20
West Shenandoah.....		21	21	25	.....	10	22	19	23	17	23	21	20
Kohinoor.....		21	21	25	.....	19	22	18	23	17	23	21	20
Indian Ridge.....		23	24	25	.....	14	22	20	26	19	26	22	22
Lehigh Valley Coal Co.	Schuylkill.....	21	19	23	.....	11	23	19	25	23	24	20	21
Packer No. 2.....		21	19	23	.....	11	23	19	25	23	24	20	21
Packer No. 3.....		21	19	23	.....	11	23	19	25	23	24	20	21
Packer No. 4.....	Susquehanna Coal Co.	22	21	23	.....	15	18	15	16	20	23	20	20
William Penn.....		22	21	23	.....	15	18	15	16	20	23	20	20
Lehigh Valley Coal Co.		22	21	23	.....	15	18	15	16	20	23	20	20
Thomas Colliery Co.	Schuylkill.....	24	23	24	.....	17	23	23	24	23	25	26	25
Cambridge Coal Co.		24	23	24	.....	17	23	23	24	23	25	26	25
Cambridge.....	Schuylkill.....	22	20	21	.....	12	22	20	24	21	24	20	20
Brookwood Coal Co.		22	20	21	.....	12	22	20	24	21	24	20	20
Stanton.....	Schuylkill.....	23	23	28	.....	12	.....	.....	11	20	26	25	21
Gerber and Seaman		23	23	28	.....	12	.....	.....	11	20	26	25	21
Furnace.....	Schuylkill.....	22	21	21	.....	14	21	20	23	17	22	21	20

Total

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 28	George Paul, .....	Hungarian...	Laborer, ....	29	S.	.....	.....	Draper, .....	Schuylkill....	Fatally injured by car. Died January 27, outside.
March 4	August Kowalski, .....	Lithuanian...	Miner, .....	33	M.	1	.....	Packer, No. 3, .....		Run over by gas.
March 10	Luher Taylor, .....	American...	Driver, .....	18	S.	.....	.....	Draper, .....		Fell under cars.
March 21	Mike Rakus, .....	Italian...	Laborer, ....	24	S.	.....	.....	Draper, .....		Instantly killed by fall of coal.
May 15	John Kutsko, .....	Lithuanian...	Repairman, ..	38	M.	1	1	Shenandoah City		Instantly killed by explosion of dynamite.
May 15	Felix Varacofski, .....	Polish...	Repairman, ..	43	M.	1	2	Shenandoah City		Instantly killed by explosion of dynamite.
May 15	Joseph Bartusky, .....	Lithuanian...	Driver, .....	39	M.	1	.....	Shenandoah City		Instantly killed by explosion of dynamite.
May 15	John Juko, .....	Polish...	Miner, .....	44	M.	1	1	Shenandoah City		Instantly killed by explosion of dynamite.
May 15	James Quimofski, .....	Polish...	Miner, .....	22	S.	.....	.....	Shenandoah City		Instantly killed by explosion of dynamite.
May 15	Walter Quimofski, .....	Polish...	Miner, .....	26	M.	1	.....	Shenandoah City		Instantly killed by explosion of dynamite.
June 6	William Marchulis, .....	Lithuanian...	Laborer, ....	29	S.	.....	.....	West Shenandoah, .....		Run over by cars.
July 11	John Uchinsky, .....	Lithuanian...	Miner, .....	59	M.	1	.....	Packer, No. 2, .....		Fatally injured by fall of coal.
July 28	Edward Brown, .....	American...	Miner, .....	42	S.	.....	.....	Kelly's Run, .....		Fatally injured by fall of coal.
Aug. 10	John Jones, .....	Welsh...	Starter, .....	54	M.	.....	1	Kelly's Run, .....		Fatally injured by falling prop.
Aug. 23	Joseph Barnatolis, .....	Lithuanian...	Miner, .....	23	S.	.....	.....	Hudson Ridge, .....		Fatally injured by fall of coal.
Sept. 1	Frank Maria, .....	Italian...	Laborer, ....	21	S.	.....	.....	Hudson Wash- ing, .....		Instantly killed. Crushed by cars. Out- side.
Oct. 12	Andrew Harkman, .....	Russian...	Miner, .....	40	M.	1	2	Packer No. 4, .....		Instantly killed by fall of coal.
Oct. 12	Joseph Miller, .....	Lithuanian...	Laborer, ....	23	S.	.....	.....	Gilberton, .....		Fatally injured by fall of coal. Died Octo- ber 1.
Nov. 11	William Carl, .....	American...	Driver, .....	25	M.	1	1	Shenandoah City		Run over by cars. Died in hospital.
Nov. 13	Joseph Stabinski, .....	Polish...	Miner, .....	22	S.	.....	.....	Furnace, .....		Instantly killed by fall of coal.
Nov. 13	Mike Miklewicz, .....	Lithuanian...	Laborer, ....	60	M.	1	1	William Penn., .....		Run over by cars. Died in hospital. Out- side.
Dec. 16	William Manefski, .....	Lithuanian...	Laborer, ....	23	S.	.....	.....	Gilberton, .....		Struck by falling prop. Died in hospital.
Dec. 27	Mike Rice, .....	Polish...	Miner, .....	22	S.	.....	.....	William Penn., .....		Instantly killed by fall of coal.
Dec. 4	Rob. Matusitus, .....	Lithuanian...	Miner, .....	40	M.	1	3	William Penn., .....		Instantly killed by fall of coal.
Dec. 7	Paul Pekitus, .....	Lithuanian...	Slatepicker, ..	16	S.	.....	.....	Knickerbocker, .....		Caught in elevator and instantly killed. Out- side.
Dec. 11	Patrick Flannery, .....	American...	Gate tender, ..	16	S.	.....	.....	Oxford washery, .....		Caught on revolving shaft and instantly killed. Outside.
Dec. 13	Anthony Keitosko, .....	Polish...	Miner, .....	57	M.	1	.....	Shenandoah City		Foot cut off by fall of coal. Died from shock.
Dec. 29	Hez. Davis, .....	American...	Driver, .....	21	S.	.....	.....	Boston Run, .....		Killed, breaking of high pressure air line.

\*Widower.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.								
1	William Kustuski, .....	Lithuanian, .....	Miner, .....	26	M.	Shenandoah City, .....		Burned by gas.
1	Elody Utia, .....	Lithuanian, .....	Laborer, .....	21	S.	Shenandoah City, .....		Burned by gas.
6	William Skutskie, .....	Lithuanian, .....	Miner, .....	21	S.	West Shenandoah, .....		Two toes cut off by fall of slate.
9	John Kugler, .....	Lithuanian, .....	Miner, .....	38	S.	Packer No. 3, .....		Slightly burned by gas.
9	James Keating, .....	Irish, .....	Jig runner, .....	16	S.	Brighton wash- ery, .....		Leg broken by falling down chute. Out- side.
9	Joe Wasser, .....	Lithuanian, .....	Miner, .....	24	S.	Packer No. 3, .....		Burned by explosion of gas.
10	John Shutskoskie, .....	Polish, .....	Miner, .....	25	S.	Knickerbocker, ..		Head and body bruised by falling down manway.
10	John Lennick, .....	Polish, .....	Miner, .....	24	S.	Knickerbocker, ..		Head and body bruised by falling down manway.
11	Adam Stufenberge, .....	American, .....	Switchman, ..	25	S.	Turkey Run, ....		Knee-cap fractured. His foot turned Outside.
22	Charles Culbis, .....	Lithuanian, .....	Miner, .....	32	S.	Kohinoor, .....		Leg broken by fall of rock.
26	Peter Kohler, .....	Polish, .....	Laborer, .....	38	M.	Shenandoah City, .....		Leg broken by fall of coal.
Feb.	Josef Lutsavage, .....	Polish, .....	Miner, .....	38	M.	Kelley's Run, ..		Leg broken, column pipe rolled on him.
11	Harry Koller, .....	American, .....	Laborer, .....	18	S.	Poston Run, ....		Leg broken, caught in scraper line, Outside.
21	William Olshinsky, .....	Lithuanian, .....	Laborer, .....	28	S.	Kohinoor, .....		Leg broken, struck by piece of timber rolling off truck.
22	George Gecavage, .....	Lithuanian, .....	Miner, .....	45	M.	Kohinoor, .....	Schuykill,...	Leg broken by fall of rock.
March	William Landeman, .....	American, .....	Blacksmith, ..	29	M.	West Shenandoah, .....		Leg broken, water tank fell on him. Out- side.
4	Stanislo Ellisnow, .....	Polish, .....	Miner, .....	42	M.	Packer No. 3, ....		Burned by gas.
17	John August, .....	Russian, .....	Miner, .....	40	M.	Cambridge, .....		Leg broken by fall of coal.
20	John Merscavage, .....	Lithuanian, .....	Miner, .....	34	M.	Packer No. 3, ....		Arm broken by fall of coal.
23	Simon Mooney, .....	American, .....	Carpenter, ....	40	M.	Packer No. 4, ....		Rope wheel fell on his leg and broke it. Outside.
May	Samuel Powell, .....	American, .....	Fire boss, ....	32	M.	Shenandoah City, .....		Arm broken by fall of coal and timber.
15	Chas. Hush, .....	Polish, .....	Miner, .....	22	S.	Shenandoah City, .....		Body bruised by explosion of dynamite.
15	William Ulconskie, .....	Polish, .....	Starter, .....	28	M.	Shenandoah City, .....		Bruised about body by explosion of dy- namite.
15	Charles Burtonovich, ....	Polish, .....	Driver, .....	25	S.	Shenandoah City, .....		Burned by hot air from dynamite and powder.
22	Andrew Zorah, .....	Hungarian, .....	Miner, .....	35	M.	William Penn, ...		Jaw bone fractured by fall of rock.
25	Clarence Hoffman, .....	German, .....	Carpenter, ....	20	S.	William Penn, ...		Leg broken. Pinch bar slipped. Outside.
June	Ralph Kline, .....	American, .....	Driver, .....	19	S.	Knickerbocker, ..		Face cut and bruised. Kicked by mule.

June	9	Joseph Brooks, .....	American, .....	Slatepicker, .. 15	S. Kehley's Run, ..	Arm broken and scalp cut. Fell down elevator shaft. Outside.
	14	George Kochinsky, .....	Polish, .....	Miner, .....	M. Knickerbocker, ..	Face and hands burned by explosion of gas.
July	16	Theo. Melnick, .....	Greek, .....	Miner, .....	M. Kohnoor, .....	Leg and arm broken by fall of coal.
	11	William Krick, .....	Lithuanian, .....	Miner, .....	M. Packer No. 2, ...	Head and body cut and bruised by fall of coal.
	12	Stiney Astronskie, .....	Lithuanian, .....	Miner, .....	M. Packer No. 3, ...	Arm broken by fall of slate.
	20	Anthony Polinitus, .....	Polish, .....	Miner, .....	M. Knickerbocker, ..	Face and hands burned by explosion of gas.
	24	Ben. Butscavage, .....	Polish, .....	Miner, .....	M. Packer No. 4, ...	Arm broken by fall of coal.
	30	Joe Maluskie, .....	Lithuanian, .....	Miner, .....	S. Gilberton, .....	Face and hands burned by explosion of gas.
Aug.	2	John Gribbon, .....	American, .....	Laborer, .....	S. Packer No. 3, ...	Arm broken by being squeezed between face and rib.
	7	Matt Mackalavage, .....	Lithuanian, .....	Miner, .....	M. Shenandoah City, ..	Leg cut off. Run over by car.
	17	Fred. Hildebrand, .....	American, .....	Repairman, .. 32	M. West Shenandoah	Leg broken by fall of coal.
	18	Martin Quinn, .....	American, .....	Slatepicker, .. 17	S. Knickerbocker, ..	Leg caught in driving wheel of shakers and was broken. Outside.
Sept.	22	Joe Yonshulis, .....	Lithuanian, .....	Miner, .....	M. Draper, .....	Collar bone broken. Crushed between car and chute.
Oct.	2	Alex. Yekmovitch, .....	Lithuanian, .....	Miner, .....	S. Kohnoor, .....	Arm broken by fall of coal.
	27	Alex. Carthoe, .....	Polish, .....	Miner, .....	M. West Shenandoah	Face and hands burned by explosion of gas.
	27	Joe Yoncopskie, .....	Polish, .....	Miner, .....	M. West Shenandoah	Face and hands burned by explosion of gas.
Nov.	27	Egnots Orchas, .....	Russian, .....	Miner, .....	M. Packer No. 4, ...	Leg broken by fall of coal.
	30	Chas. Urysockie, .....	Polish, .....	Miner, .....	M. Shenandoah City, ..	Face and hands burned by explosion of gas.
Dec.	5	Mart McLane, .....	American, .....	Starter, .....	S. Packer No. 2, ...	Leg broken. Struck by piece of timber while riding down slope.
	8	Joe Snyder, .....	German, .....	Driver, .....	S. Kehley's Run, ..	Leg broken in trying to jump on moving dumper. Outside.

Schuylkill....



## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

March 21, Draper Colliery, Mike Rakus, Italian, laborer, was loading a car when a large piece of coal rolled from the low side crushing him against the car and killing him instantly. Unavoidable.

July 11, Packer No. 2 Colliery, John Ulchinsky, Lithuanian, miner, was on the night shift and had just reached the face of the chute when a large piece of coal fell, killing him. Unavoidable.

June 28, Kehley's Run Colliery, Edward Brown, American, miner, after having fired two shots returned to the face when a piece of coal fell, fatally injuring him. He died the next day. Unavoidable.

August 23, Indian Ridge, Joseph Barnetonis, Lithuanian, miner, fired a hole on the rib which did not blow out the coal and in trying to bar it out with his drill the top fell, killing him. Unavoidable.

September 12, Packer No. 4 Colliery, Andrew Harkman, Russian, miner, was dressing off loose coal after firing a shot, when a top piece fell, killing him instantly. Carelessness.

October 2, Gilberton Colliery, Joseph Miller, Lithuanian, laborer, was making room to put a battery in breast when a piece of coal fell from the top, injuring him. He died in Miners' Hospital October 15.

November 11, Furnace Colliery, Joseph Stabinski, Polish, miner, was robbing a pillar in the Mammoth vein and while drilling a hole the pillar fell on him killing him instantly. Unavoidable.

November 27, William Penn Colliery, Mike Rice, Polish, miner, was working in a new breast. He had been blasting two days in the mining bench under the top coal, and instead of pulling down the top coal that he knew was unsafe, he was firing another hole underneath when it fell on him, killing him instantly. He was incompetent and careless.

December 4, William Penn Colliery, Robert Matusitus, Lithuanian, miner, was robbing pillars in the Mammoth vein when a heavy fall occurred crushing the heading timber and killing him instantly. Unavoidable.

December 13, Shenandoah City Colliery, Anthony Keitoskie, Polish, miner, was dressing off face after firing a shot, when top coal fell, cutting off his foot. He died from the shock same day. Unavoidable.

## Cars

January 26, Draper Colliery, George Paul, Hungarian, laborer, was sanding the rail, sitting on front bumper of the locomotive with the dumpers in front of the locomotive on the rock bank, when the dumper next to the locomotive jumped off the track, crushing him between locomotive and body of car. Avoidable. Outside.

March 10, Draper Colliery, Luther Taylor, American, driver, while attempting to jump on the front of an empty trip, that was pulling off a turnout, fell under the cars. He died same day. Avoidable.

June 6, West Shenandoah, William Matchulis, Lithuanian, laborer, was repairing pulleys on double track slope on night shift, when the engineer started to hoist men from a lower lift, Matchulis stepped

to one side to a safe place, but for some unknown reason, as soon as the down trip arrived at that point, he stepped in front of the trip and was seriously injured. He died next day. Avoidable.

September 1, Hudson Washery, Frank Marda, Italian, laborer, while in the act of uncoupling moving cars, was instantly killed. The front car, on reaching the bottom of the plane, threw the tops of the cars together, crushing Marda's head. Avoidable. Outside.

November 6, Shenandoah City Colliery, William Carl, American, driver, was riding on the front of a loaded trip when his light went out. While trying to relight his lamp he fell under the cars. He died November 8. Unavoidable.

November 13, William Penn, Mike Miklewicz, Lithuanian, laborer, was pushing a car back to the rock chute under breaker when another car struck the car he was pushing, knocking him under it. He died at the hospital. The cause of the second car running into the first was the neglect on the part of the spragger to stop the car at the proper place. Avoidable. Outside.

### Gas Explosions

March 4, Packer No. 3, August Kowlavage, Lithuanian, miner, was fatally burned. The miners in 69 breast fired two holes that liberated a large quantity of gas. When Kowlavage, who was in 68 breast, went up the inlet manway and reached the upper heading from 69 breast, he ignited the gas coming from that breast and was fatally burned. Avoidable.

### Machinery

December 7, Knickerbocker, Paul Pekitus, Lithuanian, slate picker, was caught in the elevator in some unknown manner and instantly killed. He had no business in that locality. Avoidable. Outside.

December 11, Oxford Washery, Patrick Flannery, American, gate tender, while assisting the engineer to put on the governor ball belt was caught in the shaft and instantly killed. Carelessness on the part of the engineer and victim. Avoidable. Outside.

### Miscellaneous

August 10, Kehley Run, John Jones, Welsh, starter, was starting a battery when a rush of coal loosened a prop on the opposite side from him, and it fell, striking him on the head. He died same day. Unavoidable.

November 16, Gilberton, William Manefski, Lithuanian, laborer, was struck by a falling prop. While seven men were raising a heavy 15 foot prop, two men using drills slipped, and the prop fell back, striking Manefski. He died November 27. Unavoidable.

December 29, Boston Run Colliery, Hez Davis, American, driver, was shifting cars around, left by night shift. He had run an empty car into one of the gangways but when he went in with his trip he forgot about the empty car and ran into it at full speed, knocking it off the road, and breaking the high pressure air pipe which went off with great force, blowing him along the trip for 30 feet. He was fatally injured.

### Explosion of Dynamite

May 15, Shenandoah City Colliery, John Kutsko, Lithuanian, repairman, Anthony Check, Lithuanian, repairman, Felix Varacofski, Polish, miner, Joseph Batusky, Lithuanian, driver, John Juko, Polish, miner, James Quinofski, Polish, miner, and Walter Quinofski, Polish, miner, went to their work about 6:55 A. M. on the first lift Buck Mountain Slope. Kutsko, Check and Juko had just reached a tunnel between the fifth and Sixth breasts when a terrific explosion occurred, instantly killing them.

The bodies of those found near the tunnel were horribly mangled, indicating that dynamite was the cause of the accident. Joseph Batusky was found at No. 9 breast, having been thrown from his mule, and smothered by fine dirt and rock that rushed over his face when the timber was blown out. Joseph and Walter Quinofski and Varancofski were found at the sixteenth and seventeenth breasts, having been crushed by falling timber. The explosion at the mouth of the tunnel was evidently caused by dynamite and black powder. This was indicated by the mangled bodies, the broken and shattered timbers, the pulverized rock and coal, and the heated condition of the debris that burned the hands when placed near it.

### CONDITION OF COLLIERIES

#### PHILADELPHIA AND READING COAL AND IRON COMPANY

Shenandoah City.—Ventilation and drainage good.  
Draper.—Ventilation and drainage good.  
Turkey Run.—Ventilation and drainage good.  
Gilberton.—Ventilation fair; drainage good.  
Knickerbocker.—Ventilation and drainage excellent.  
Boston Run.—Ventilation and drainage good.  
West Shenandoah.—Ventilation and drainage good.  
Kohinoor.—Ventilation fair; drainage good. The principal work done at this colliery is robbing.  
Indian Ridge.—Ventilation fair; drainage good.

#### LEHIGH VALLEY COAL COMPANY

Packer No. 2.—Ventilation and drainage fair. The principal work at this colliery is robbing.  
Packer No. 3.—Ventilation and drainage fair.  
Packer No. 4.—Ventilation and drainage fair.

#### SUSQUEHANNA COAL COMPANY

William Penn.—Ventilation and drainage fair.

#### THOMAS COAL COMPANY

Kehley's Run.—Ventilation much improved; drainage fair.

#### CAMBRIDGE COAL COMPANY

Cambridge.—Ventilation and drainage fair.

#### BROOKWOOD COAL COMPANY

Stanton.—General condition fair.

## GERBER AND SEAMAN

Furnace.—General condition fair.

## IMPROVEMENTS

## PHILADELPHIA AND READING COAL AND IRON COMPANY

Draper.—1.70-ton "Bucyrus" steam shovel was installed at the Mammoth vein strippings.

1-12 ton H. K. Porter locomotive was installed at the Mammoth Vein strippings.

Tunnel to top of proposed underground slope in Seven Foot vein, from Skidmore vein, No. 4 Slope. Total length 15 yards.

Gilberton.—An electric plant, with one 8x10 inch ball engine and one 35 light arc generator, resting on concrete foundations, was installed to light up Turkey Run Strippings and Gilberton Colliery.

West Shenandoah.—Slush bore hole No. 1, to Buck Vein, 125 feet deep. Slush bore hole No. 2, to Little Buck vein, 119 feet deep. Slush bore hole No. 3, to Buck vein, 290 feet deep.

Pump room at bottom of mine slope.

Turkey Run.—Tunnel to bottom of split from No. 3 slope, 1st Lift 2 West Seven Foot gangway on level with present tunnel to Buck, 41 yards.

Electric light plant at strippings.

No. 1 Slope started; hoisting plant installed.

Eight foot diameter force fan erected to ventilate Four Foot drift.

Indian Ridge.—Concrete wall at timber wharf.

Thirty ton Vulcan locomotive received.

Holmes Vein slope opened and hoisting plant installed.

Shenandoah City.—Scraper line from settling tank to various bore holes for slushing.

Stable in Buck Vein, near foot of shaft, and concrete floor in same.

Rock chute to Skidmore Vein from 3rd lift No. 4 Tunnel West Seven Foot 9 2-3 yards long.

Cross cut to Skidmore from 3rd lift No. 4 tunnel East Seven Foot, No. 10 slant No. 13½ East Counter gangway at Br. No. 7, 30 yards long.

Cross cut to Skidmore from 3rd Lift to No. 4 Tunnel, West Seven Foot, 25 1-3 yards long.

Boston Run.—A 12 inch and 18 inch by 14 inch by 18 inch Jeanesville wash water pump, resting on a concrete foundation, was installed.

A pair of 18 inch by 36 inch engines to operate coal conveyor line was put in place on concrete foundation.

A tunnel to Holmes Vein from West Top Split gangway, 3rd lift, was in progress January 1, 1907. Distance driven in 1906, 66 yards.

Plank Ridge Jig House.—Scraper line from bank west of washery to take bank to shaker at top of washery.

## LEHIGH VALLEY COAL COMPANY

Packer No. 3.—An eight foot fence has been built around the plant and the old breaker removed; also the boiler house near the breaker and the one on top of the hill have been removed.



A rock slope has been driven from the Buck Mountain slope to the Seven Foot slope, combining these slopes, both being operated with the Seven Foot engine.

A bore hole was driven to prove the overturn of the Mammoth vein, and tunnel started to this overturn, from the 4th lift.

Packer No. 4.—A car barn was built for holding coal from Packer No. 5.

A tunnel was driven from the Buck Mountain slope to the Mammoth 4th level. With this tunnel they are enabled to do away with the inside Mammoth slope.

A tunnel driven from the Mammoth to the Skidmore 1st level to develop the Skidmore vein.

Tunnel driven from the Mammoth to the Skidmore 3rd level to open Skidmore gangway for haulage road between Packers Nos. 4 and 2.

Packer No. 2.—An 8 foot fence built around the colliery.

The Tender Slope engine was replaced with a 30 inch and 35x60 inch Cross Compound engine. The purpose of putting in this engine was to hoist two cars on the tender slope, and ultimately to do away with the main slope, after connection has been made with the Packer No. 4 operation, through the Skidmore gangway on the 2nd lift.

The stripping has been very much extended and a self-acting plane placed at the eastern end, operated with a grip sheave, for letting down the coal to the colliery level.

The work of opening up the 5th level has advanced sufficiently to start driving tunnels to the Buck Mountain and to the Mammoth leader.

The rock airway has been driven from the Mammoth to the Mammoth leader for ventilating the 5th level; the length of this airway is 99 feet.

#### SUSQUEHANNA COAL COMPANY

William Penn.—12 new dump cars; 80 new mine cars; new engine house for dirt plane; new lumber machine shed.

Tunnel from No. 1 drift Skidmore to Seven Foot, 34 yards.

Tunnel from West Four Foot, No. 1 lift to the Orchard, 96 yards.

One battery of Vulcan tubular boiler.

Two colliery sewers.

One set stove coal spiral separators.

Total amount expended for above improvements, \$15,269.70.

#### THOMAS COLLIERY COMPANY

The following is a list of improvements made at the colliery of the above company during the year 1906, and other improvements which will be completed during 1907.

#### Inside

New slope driven from second to third level in Buck Mountain vein gangways driven east and west 300 feet up to January 1, 1907. Compound condensor duplex pump, capacity 300,000 gallons, installed and working, which gives a reserve over the former capacity.

Airway in Mammoth vein leading to fan enlarged and air current nearly doubled.



New airway from third level in Buck Slope to surface and 16 foot fan in the course of erection.

### Outside

Tower and cleaner erected and conveyor line installed to convey coal from head of slope to breaker.

Eight new shakers, 12 new spiral separators and 2 new Hazleton jigs installed, and breaker enlarged and strengthened throughout. Capacity 1,800 tons per day.

Hand stripping of Mammoth vein begun and  $\frac{1}{2}$  mile railroad track constructed from breaker to strippings.

New locomotive purchased to handle coal, rock, etc., from strippings.

Two steam shovels installed for the purpose of more extensive stripping in the Mammoth vein.

Pair of 16x30 inch new hoisting engines set on concrete foundation for hoisting coal from the third to second level of new Buck Mountain slope; engines on surface and rope extended through 6 inch bore-hole to head of new slope at second level.

Twelve old type cylinder boilers replaced by 4 return tubular boilers with a total horse-power of 600.

Two others in the course of construction with combined horse-power of 300.

### Mine Foremen's Examinations

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in Pottsville, April 24 and 25. The Board was composed of the following members: A. B. Lamb, Inspector; William Auman, Superintendent; George H. Young, Miner; Joseph Corby, Miner.

The following candidate was recommended for a certificate of qualification:

#### Assistant Mine Foreman

William Rowland, Shenandoah.



## Fourteenth District

COLUMBIA AND SCHUYLKILL COUNTIES

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Centralia, Pa., March 16, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith the annual report of the Fourteenth Anthracite District for the year ending December 31, 1906.

Respectfully submitted,

JAMES A. O'DONNELL,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	10
Number of mines, .....	21
Number of mines in operation, .....	21
Number of tons of coal shipped to market, .....	1,931,393
Number of tons used at mines for steam and heat, .....	243,696
Number of tons sold to local trade and used by employes, .....	35,345
Number of tons produced, .....	2,210,434
Number of persons employed inside of mines, .....	3,315
Number of persons employed outside, .....	2,202
Number of fatal accidents inside of mines, .....	11
Number of fatal accidents outside, .....	7
Number of non-fatal accidents inside of mines, .....	23
Number of non-fatal accidents outside, .....	10
Number of tons of coal produced per fatal accident inside, .....	200,948
Number of persons employed per fatal accident inside, ...	301
Number of persons employed per fatal accident outside, .....	314
Number of persons employed per non-fatal accident inside, .....	144
Number of persons employed per non-fatal accident outside, .....	220
Number of wives made widows, .....	10
Number of children orphaned, .....	36
Number of steam locomotives used outside, .....	8
Number of compressed air locomotives used inside, .....	2
Number of electric motors used inside, .....	3
Number of fans in use, .....	19
Number of gaseous mines in operation, .....	20
Number of non-gaseous mines in operation, .....	1

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TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company, . . . .	1,209,663
Lehigh Valley Coal Company, . . . . .	494,302
Midvalley Coal Company, . . . . .	389,678
W. R. McTurk Coal Company, . . . . .	71,388
Raven Run Coal Company, . . . . .	41,206
Dreshman Coal Company, . . . . .	4,197
Total, . . . . .	<u>2,210,434</u>

## Production by Counties

Schuylkill, . . . . .	1,345,197
Columbia, . . . . .	865,237
Total, . . . . .	<u>2,210,434</u>



TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co., ..	3	5	8	13	3	16	427,321	12,051	1,714	1,285	2,999	571	357	132	428
Lehigh Valley Coal Co., ..	3	2	5	3	7	9	164,717	217,171	337	453	1,390	312	227	462	65
Midvalley Coal Co., ..	3	.....	3	6	.....	6	77,937	37,946	377	263	840	115	.....	86	.....
W. R. McCurt Coal Co., ..	.....	.....	.....	2	.....	2	.....	33,634	82	160	242	.....	.....	41	.....
Miscellaneous companies, ..	.....	.....	.....	.....	.....	.....	.....	.....	3	41	46	.....	.....	.....	.....
Totals and averages for district, .....	11	7	18	23	10	33	200,948	96,106	3,315	2,202	5,517	301	311	144	226

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
<b>Causes of Accidents Inside</b>													
Falls of coal, .....					1				1		2	1	5
Falls of slate, .....												1	1
Mine cars, .....							1						1
Explosions of gas and dust, .....											1		1
Suffocation by gas, etc., .....									1				1
Premature blasts, .....													1
Falling into slopes, etc., .....			1										1
Totals, .....			1		1	1	1		2		3	2	11
<b>Causes of Accidents Outside</b>													
Cars, .....	1									1			2
Machinery, .....					1					1	1		3
Miscellaneous, .....			1						1				2
Totals, .....	1		1		1				1	2	1		7
Grand totals inside and outside, .....	1		2		2	1	1		3	2	4	2	18

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
<b>Causes of Accidents Inside</b>													
Falls of coal, .....	1	1				1				1			4
Falls of slate, .....		1											1
Falls of roof, .....	1										1		2
Mine cars, .....		1										1	4
Explosions of gas and dust, .....							1			4			5
Premature blasts, .....						2		1					3
By mules, .....	1								1				3
Machinery, .....			1								1		1
Totals, .....	3	3	1			4	1	2	1	5	2	1	23
<b>Causes of Accidents Outside</b>													
Cars, .....											1		1
Machinery, .....	1	1	1			1	1						5
Miscellaneous, .....												2	4
Totals, .....	1	1	3			1	1				1	2	10
Grand totals inside and outside, .....	4	4	4			5	2	2	1	5	3	3	33

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Miners, .....									1		2	2
Miners' laborers, .....			1		1		1				1	
Drivers and runners, .....						1	1					
All other employes, .....								1				
Totals, .....			1		1	1	1		2		3	2
<b>Outside</b>												
Slatepickers (boys), .....					1							
All other employes, .....	1		1						1	2	1	
Totals, .....	1		1		1				1	2	1	
Grand totals inside and outside, .....	1		2		2	1	1		3	2	4	2

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Miners, .....	1	2				2	1	1		4	1	
Miners' laborers, .....	1					1						
Drivers and runners, .....						1					1	
Doorboys and helpers, .....	1		1						1			
All other employes, .....		1						1		1		
Totals, .....	3	3	1			4	1	2	1	5	2	1
<b>Outside</b>												
Slatepickers (boys), .....	1											1
All other employes, .....		1	3			1	1				1	1
Totals, .....	1	1	3			1	1				1	2
Grand totals inside and outside, .....	4	4	4			5	2	2	1	5	3	3

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1				1	1			3	1	4		11
Irish, .....												1	1
German, .....			1				1						1
Polish, .....										1			1
Italian, .....			1									1	2
Slavonian, .....					1							1	2
Totals, .....	1		2		2	1	1		3	2	4	2	18

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	2	2	2			2		1	1	2		3	16
English, .....							1	1		1	1		3
Irish, .....							1	1		2			4
Polish, .....	1	2				1	1				1		6
Italian, .....						1	1				1		3
Slavonian, .....			1			1							2
Lithuanian, .....	1												1
Totals, .....	4	4	4			5	2	2	1	5	3	3	33





[illegible]

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Hammond, .....	Schuylkill, .....					
Potts, .....	Columbia, .....					
Bast, .....	Schuylkill, .....	W. J. Richards, ..	Pottsville, .....	Reese Tasker, ....	Pottsville, .....	P. and R.
Bear Ridge, .....	Schuylkill, .....					
Girard Mammoth, .....	Schuylkill, .....					
Lehigh Valley Coal Co.						
Centralia, .....	Columbia, .....					
Packer No. 5, .....	Schuylkill, .....	S. D. Warriner, ...	Wilkes-Barre, ....	J. M. Humphrey, ...	Centralia, .....	Lehigh Valley
Locust Run, .....	Columbia, .....					
Midvalley Coal Co.						
Midvalley, .....	Columbia, .....	John S. Wentz, ....	Philadelphia, .....	T. E. Snyder, .....	Wilburton, .....	Lehigh Valley
W. R. McTurk Coal Co.						
Girard, .....	Schuylkill, .....	W. R. McTurk, ....	Philadelphia, .....	Jacob M. Holt, ....	Girardville, .....	P. and R.
Raven Run Coal Co.						
Raven Run washery, .....	Schuylkill, .....	William C. Thomas, ..	Hazleton, .....	Jeffrey Landman, ..	Minersville, .....	P. and R.
Pioneer, .....	Schuylkill, .....	John Dreshman, ..	Ashland, .....			

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.												
Hammond, .....	Schuylkill, .....	330,882	23,950	6,626	351,478	242	1,039	2	6	2,400	126,282	59
Potts, .....	Columbia, .....	266,822	48,270	5,364	321,056	244	727	3	1	.....	81,160	84
East, .....	{ Schuylkill, .....	137,384	50,617	7,130	285,141	247	626	2	5	.....	94,385	82
Bear Ridge, .....	{ Schuylkill, .....	136,320	1,486	1,486	136,320	213	312	1	.....	827	16,216	48
Girard Mammoth, .....	{ Schuylkill, .....	79,427	25,380	319	105,726	194	135	.....	1	12	4,624	24
Totals, .....		1,023,411	164,297	21,955	1,209,663	.....	2,969	8	16	3,239	322,667	297
Lehigh Valley Coal Co.												
Centralia, .....	Columbia, .....	123,291	23,109	5,073	154,533	12*	660	.....	5	971	74,549	75
Locust Run, .....	Columbia, .....	.....	.....	.....	.....	.....	19	.....	.....	.....	.....	3
Packer No. 5, .....	Schuylkill, .....	326,735	13,024	.....	339,769	*	711	5	4	3,331	65,681	100
Totals, .....		473,026	36,103	5,073	494,302	.....	1,390	5	9	6,205	140,234	177
Midvalley Coal Co.												
Midvalley, .....	Columbia, .....	379,179	36,560	3,058	389,678	293	840	5	6	3,325	118,697	124
W. R. McTurk Coal Co.												
Girard, .....	Schuylkill, .....	66,392	4,484	512	71,388	177	242	.....	2	50	11,000	30
Raven Run Coal Co.												
Raven Run washery, .....	Schuylkill, .....	38,414	1,902	800	41,206	147	57	.....	.....	.....	.....	.....

\*Coal is prepared and shipped from Packer No. 4 breaker.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Pioneer, .....	Schuylkill, .....	1,331,393	250	3,947	4,197	246	9	15	33	20	650	3
Grand totals, .....	.....	1,331,393	243,696	35,345	2,210,434	.....	5,517	15	33	12,839	593,158	631

TABLE 2.—Recapitulation

Philadelphia and Reading Coal and Iron Co., .....	{Schuylkill,.....}	1,023,411	164,297	21,955	1,209,603	.....	2,399	8	16	3,239	322,667	227
Lehigh Valley Coal Co., .....	{Columbia,.....}	453,026	36,263	5,073	494,302	.....	1,390	5	9	6,295	149,234	177
Midvalley Coal Co., .....	{Schuylkill,.....}	370,129	36,500	3,058	389,678	.....	840	5	6	3,325	118,607	124
W. R. McCurtick Coal Co., .....	{Columbia,.....}	66,392	4,484	512	71,388	.....	241	.....	2	50	11,060	30
Raven Run Coal Co., .....	{Schuylkill,.....}	38,444	1,962	800	41,206	.....	37	.....	.....	.....	.....	.....
Dreshman Coal Co., .....	{Schuylkill,.....}	.....	1,250	3,947	4,197	.....	9	.....	.....	20	650	3
Totals, .....	.....	1,931,393	243,696	35,345	2,210,434	.....	5,517	15	33	12,839	593,158	631

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Philadelphia and Reading Coal and Iron Co.	{ Schuylkill,.... }	24	900	50	6,750	7,650	2	2	44	1,219	6	14,800	13,750	.....	1
Lehigh Valley Coal Co., .....	{ Columbia,.... }	15	555	25	3,900	4,455	2	.....	3	10,440	5	6,647	3,680	1	1
Midvalley Coal Co., .....	{ Schuylkill,.... }	.....	.....	12	3,000	3,000	3	.....	9	89	6	7,323	5,330	.....	1
W. R. McTurk Coal Co., .....	{ Columbia,.... }	.....	.....	6	760	760	1	.....	17	816	.....	.....	.....	.....	.....
Raven Run Coal Co., .....	{ Schuylkill,.... }	.....	.....	2	250	250	.....	.....	7	328	.....	.....	.....	.....	.....
Dreshman Coal Co., .....	{ Schuylkill,.... }	.....	.....	1	100	100	.....	.....	1	50	.....	.....	.....	.....	.....
Totals, .....	.....	39	1,455	90	14,700	16,215	8	2	3	149	18,742	17	26,777	1	3



TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Col- leries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Statepickers (boys)	Statepickers (men)	Bookkeepers and clerks	All other employees	Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill.....	1	1	6	162	79	23	12	4	210	104	602	....	2	14	30	37	43	3	258	437	
	Hammond.....	1	1	8	115	29	31	30	4	36	97	412	....	1	8	18	72	23	6	176	315	
	Potts.....	1	1	9	105	50	77	54	8	89	140	460	....	1	12	32	48	18	3	181	296	
	East.....	1	1	3	42	80	13	3	1	23	34	203	....	1	4	6	34	10	1	70	159	
	Bear Ridge.....	1	1	....	....	....	1	....	4	8	23	37	....	1	....	16	....	....	....	....	....	
Grand Mammoth.....	Schuylkill.....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
Totals.....	.....	7	7	26	424	238	97	79	18	426	398	1,714	....	8	41	112	241	104	15	761	1,985	
Lehigh Valley Coal Co.	Columbia.....	5	1	5	155	55	40	3	3	....	142	408	....	3	16	31	40	....	3	159	252	
	Central.....	1	1	6	161	182	58	9	1	....	183	523	....	1	12	14	....	....	1	168	252	
	Locust Run.....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
	Packer No. 2.....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
Totals.....	.....	5	3	11	256	237	78	12	6	....	328	937	....	5	28	59	40	....	4	328	453	
Midvalley Coal Co.	Columbia.....	2	2	6	220	160	59	12	6	29	31	547	....	1	15	24	79	31	5	106	273	
	Midvalley.....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
	W. R. McTuck Coal Co.	1	1	1	26	14	6	....	....	29	....	82	....	1	3	14	45	6	3	82	160	
Grand.....	Schuylkill.....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	

\*Pumping station.



TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Philadelphia and Reading Coal and Iron Co.	Schuylkill,.....	23	24	25	.....	9	25	20	26	19	26	23	22	242
Hammond, .....	Columbia,.....	23	25	24	.....	15	26	20	24	19	26	21	23	244
Potts, .....	{ Schuylkill,..... }	23	25	25	.....	15	26	20	24	18	26	22	23	247
East, .....		23	25	25	.....	15	26	20	24	18	26	22	23	247
Bear Ridge, .....		18	25	23	.....	13	24	20	23	15	20	19	18	213
Girard Mammoth, .....		24	25	23	.....	13	24	20	26	19	22	.....	.....	194
Lehigh Valley Coal Co.	Columbia,.....	19	17	22	.....	11	16	20	17	.....	.....	.....	.....	122
Centralia, .....	Schuylkill,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Packer No. 3,* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Midvalley, .....	Columbia,.....	23	18	23	.....	13	23	21	24	23	25	21	21	233
W. R. McCook Coal Co.	Schuylkill,.....	24	19	22	.....	16	23	18	4	1	19	21	10	177
Girard, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raven Run Coal Co.	Schuylkill,.....	18	13	17	.....	5	17	15	10	16	10	20	12	147
Raven Run washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pioneer, .....	Schuylkill,.....	22	23	23	20	19	22	15	22	15	24	22	19	246
Dreshman Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Coal is prepared and shipped from Packer No. 4 breaker.

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 8	William Conley, .....	American,...	Outside loader, .....	24	S.	.....	.....	Bear Ridge, .....	Schuylkill, .....	Killed between car and breaker timbers, outside.
March 14	Domnick Moucher, ..	Italian, .....	Loader, .....	30	M.	1	2	Packer No. 5, .....	Schuylkill, .....	Killed by fall of clay in the stripping, outside.
28	William Weast, .....	German, .....	Laborer, .....	39	M.	1	5	Potts, .....	Columbia, .....	Killed by falling down the slope.
May 22	Simon Murtick, .....	Slavonian, .....	Laborer, .....	42	M.	1	3	Packer No. 5, .....	Schuylkill, .....	Killed by fall of coal.
23	August Bushbee, .....	American, .....	Slatepicker, .....	16	S.	.....	.....	Potts, .....	Columbia, .....	Killed by being twisted on a jig shaft, outside.
June 30	James Malarkey, .....	American, .....	Driver, .....	28	M.	1	1	Midvalley, .....	Columbia, .....	Killed by premature blast.
July 24	Thomas Shulsky, .....	Polish, .....	Driver, .....	21	S.	.....	.....	Midvalley, .....	Columbia, .....	Died from injuries received by cars.
Sept. 7	Samuel Mauer, .....	American, .....	Laborer, .....	44	S.	.....	.....	Packer No. 5, .....	Schuylkill, .....	Killed by falling timber while razing old breaker, outside.
17	Andrew Donahoe, .....	American, .....	Miner, .....	55	M.	1	4	East, .....	Schuylkill, .....	Killed by fall of coal.
19	George O'Boyle, .....	American, .....	Starter, .....	40	M.	1	4	Packer No. 5, .....	Schuylkill, .....	Suffocated by gas.
Oct. 11	Domnick Dotern, .....	Italian, .....	Laborer, .....	28	M.	1	2	Hammond, .....	Schuylkill, .....	Killed by cars under the breaker, outside.
22	Martin Mack, .....	American, .....	Repairman, .....	24	S.	.....	.....	Hammond, .....	Schuylkill, .....	Caught in rope wheel. Died November 27, at the State Hospital. Outside.
Nov. 7	Edward Gallagher, .....	American, .....	Miner, .....	38	M.	1	5	Potts, .....	Columbia, .....	Killed by fall of coal.
7	Morgan Watkins, .....	American, .....	Driver, .....	17	S.	.....	.....	Midvalley, .....	Columbia, .....	Killed by an explosion of gas.
14	Edward Lowery, .....	American, .....	Laborer, .....	16	S.	.....	.....	East, .....	Schuylkill, .....	Killed by falling in the rollers, outside.
21	Anthony J. McAndrew, .....	American, .....	Miner, .....	25	S.	.....	.....	Midvalley, .....	Columbia, .....	Killed by fall of coal.
11	George Hudock, .....	Slavonian, .....	Miner, .....	40	M.	1	4	Midvalley, .....	Columbia, .....	Killed by fall of slate.
Dec. 21	Thomas Noon, .....	Irish, .....	Miner, .....	42	M.	1	6	Packer No. 5, .....	Schuylkill, .....	Fatally injured by fall of coal. Died at the State Hospital December 30.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person		Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Feb.	9	William Whiteman	American	Slatepicker	15	S.	Centralia	Columbia	Collar bone and one rib fractured by getting caught in a screen.
	22	James Grady	American	Doortender	16	S.	Hammond	Schuylkill	Head and body bruised by a mule walking on him.
	30	Dennis Doondish	Polish	Laborer	29	M.	Packer No. 5	Schuylkill	Leg fractured by a fall of coal.
	31	Joe Hegolos	Lithuanian	Miner	20	M.	Packer No. 5	Schuylkill	Leg fractured by a fall of slate.
	3	William Gudok	Polish	Miner	63	M.	Midvalley	Columbia	Legs and arm torn off at the elbow. Caught in machinery. Outside.
March	5	William Knock	American	Officer	29	S.	East	Schuylkill	Legs and arm torn off at the elbow. Caught in machinery. Outside.
	19	John Devire	American	Loader	21	S.	Potts	Columbia	Arm crushed by cans.
	28	Peter Shermoskie	Polish	Miner	27	S.	Girard	Schuylkill	Body bruised by fall of coal.
	1	Thomas O'Neil	American	Doortender	18	S.	Fotts	Schuylkill	Arm fractured and body bruised. Kicked by a mule.
June	12	William Garvan	American	Jig runner	17	S.	Centralia	Columbia	Compound fracture of the arm. Caught in a jig. Outside.
	14	John Logousky	Slavonian	Laborer	40	M.	Packer No. 5	Schuylkill	Arm fractured by fall of clay. Outside.
	27	Michael Lenahan	American	Laborer	26	S.	Centralia	Columbia	Ankle fractured by falling off a trestling. Outside.
July	13	John McClintock	American	Driver	20	S.	East	Schuylkill	Arm fractured by falling under a car.
	19	John Smith	Slavonian	Miner	35	S.	Midvalley	Columbia	Ribs fractured by fall of coal.
	29	George Verbellia	American	Jig runner	15	S.	Centralia	Columbia	Leg and arm fractured by being caught in machinery. Outside.
Aug.	20	Peter Compantiz	Italian	Miner	33	M.	Midvalley	Columbia	Arm fractured by a premature blast.
	20	Joe Kavenis	Polish	Laborer	23	S.	Midvalley	Columbia	Skull fractured by a premature blast.
	8	Owen McDermald	Irish	Trackman	69	M.	Packer No. 5	Schuylkill	Collar bone, two ribs and right arm fractured by cans. Outside.
	30	John Nedro	Polish	Miner	25	S.	Midvalley	Columbia	Foot and hands burned by explosion of gas.
Sept. Oct.	6	Patrick Melatye	Irish	Miner	45	M.	Hammond	Schuylkill	Face and body lacerated by a premature blast.
	27	Edward Brennan	American	Loader	25	S.	Potts	Columbia	Arm fractured by being caught between a car and timber.
Sept. Oct.	27	James McGuire	American	Doortender	17	S.	East	Schuylkill	Arm fractured. Kicked by a mule.
	9	Thomas Monahan	American	Starter	24	S.	Potts	Columbia	Hands and face burned by an explosion of gas.
Sept. Oct.	16	William O'Brien	American	Miner	23	M.	East	Schuylkill	Three ribs fractured by fall of coal.



Oct.	24	Michael Coyle, .....	Irish, .....	Miner, .....	45	S.	Hammond, .....	Schuykill, .....	Hands and face burned by an explosion of gas.
	24	Anthony Flaherty, ....	Irish, .....	Miner, .....	43	S.	Hammond, .....	Schuykill, .....	Hands and face burned by an explosion of gas.
	24	Harry Adams, .....	English, .....	Miner, .....	42	M.	Hammond, .....	Schuykill, .....	Hands and face burned by an explosion of gas.
Nov.	10	Joseph Contee, .....	Italian, .....	Laborer, .....	25	S.	Girard Maumoth, .....	Schuykill, .....	Leg crushed by cars, necessitating amputation. Outside.
	13	John Lucas, .....	Polish, .....	Driver, .....	19	S.	Midvalley, .....	Columbia, .....	Injured internally by falling timber.
	28	Albert Kitto, .....	English, .....	Miner, .....	58	M.	Hammond, .....	Schuykill, .....	Hip fractured by fall of coal.
Dec.	1	Edward Schreppel, ....	American, .....	Driver, .....	25	S.	Girard, .....	Schuykill, .....	Shoulder blade and arm fractured. Caught between car and chute.
	4	John Shara, .....	American, .....	Slatepicker, .....	15	S.	Pitts, .....	Columbia, .....	Eye burned by cooling in contact with a lamp on the head of another boy. Out-side.
	20	James Brennan, .....	American, .....	Laborer, .....	17	S.	Centraida, .....	Columbia, .....	Two ribs fractured by falling in the breaker. Outside.

### Falls of Coal, Slate and Roof

March 14, Packer No. 5 Colliery, Dominick Moucher, Italian, laborer, was fatally injured by fall of frozen clay in the stripping. He died while being taken to the State Hospital. Outside.

May 22, Packer No. 5 Colliery, Simon Murtock, Slavonian, laborer, was instantly killed by fall of coal in the Buck vein. The miner discovered that the top coal was loose, and claims that he tried to pull it down, but failed. He allowed the laborer to work under it and it fell on him.

September 17, Bast Colliery, Andrew Donahoe, American, miner, was instantly killed by fall of coal in the Mammoth vein. He was working on the west rib of the breast when the face commenced to burst. He tried to cross the breast but was struck by fall of coal. It took twelve hours to recover his body.

November 7, Potts Colliery, Edward Gallagher, American, miner, was killed by rush of coal in a manway. He was lagging a set of timber when there was an explosion of gas which caused the coal to rush on him.

November 21, Midvalley Colliery, Anthony J. McAndrew, American, miner, was instantly killed by fall of coal. He was about to put up timber when he was struck by the coal.

December 11, Midvalley Colliery, George Hudock, Slavonian, miner, was killed by a fall of slate while working at the face of his breast.

December 21, Packer No 5 Colliery, Thomas Noon, Irish, miner, was fatally injured by fall of coal and died at the State Hospital December 30. He was dressing off the rib for a length of manway when he was struck by the coal.

### Miscellaneous, Outside

September 7, Packer No. 5 Colliery, Samuel Mauer, American, laborer, was instantly killed by a falling stick of timber while helping to tear down an old breaker. He was instructed, by the party in charge of the work, to keep away from where they were loosening the timber. He disobeyed orders and lost his life. Outside.

### Cars

January 8, Bear Ridge Colliery, William Conley, American, car loader, was fatally injured by being caught between a car and the timber of the lump coal chute. He died three hours after the accident at the State Hospital. Outside.

February 22, Hammond Colliery, Edward Kerwin, a school boy, aged eleven years, in company with two other boys went in to the Hammond breaker. When part way through the breaker the foreman saw them and ordered them to leave. They went in the direction of the dump and when crossing the dump tracks Kerwin was struck by a car and both legs mangled. He died from his injuries a few hours afterward at the State Hospital. Not a mining accident.

July 24, Midvalley Colliery, Thomas Shulsky, Polish, driver, was fatally injured while coupling loaded cars. His leg was caught between the bumpers and he died July 26.

October 11, Hammond Colliery, Dominick Dotern, Italian, laborer, was fatally injured while cleaning tracks under the breaker. He was run over by loaded cars. He died October 13 at the State Hospital. Outside.

### Gas

September 19, Packer No. 5 Colliery, George O'Boyle, American, starter, was suffocated by gas. The fire boss, when making examinations in the morning, found a heading, leading from the breast to a manway driven in the pillar, partly blocked by fall of coal which cut off the supply of air, thus allowing gas to accumulate in the face of the manway. The battery was blocked and O'Boyle went up the manway to get more fuse. When he reached the manway his lamp went out, and when he opened it to light it, he ignited the gas.

November 7, Midvalley Colliery, Morgan Watkins, American, driver, was instantly killed by an explosion of gas. He was coming out of the West Mammoth No. 1 level gangway, and encountered a body of gas that had been liberated in old workings on the second level by a fall. He was killed by the force of the explosion.

### Falling Down Slopes, Shafts, Etc.

March 29, Potts Colliery, William Weast, German, laborer, was fatally injured by falling down the slope. He was working on the night shift, timbering, and after finishing the shift he was hoisted to the top of the slope. He got off the Gunboat on the east side of the slope and walked into the slope on the west side. He fell a distance of 180 feet and died at the State Hospital March 31.

### Premature Blasts

June 30, Midvalley Colliery, James Malarkey, American, driver, was killed by a blast. He was working on the night shift and had brought a trip of empty cars to the place where a turnout was being made by cutting into the top rock. The miner had a rock hole charged and battery wires connected but did not have the battery attached. The wires lay on a compressed air line 180 feet beyond the point where the hole was charged. There was a thunder storm outside of the mine at the time, and the lightning struck near the compressor. The current followed the pipe to the point where the wires lay on the pipe, and it exploded the blast. Malarkey was directly under the blast.

### Machinery

May 28, Potts Colliery, August Bushbee, American, slatepicker, was instantly killed by being twisted on a jig shaft, his clothing having caught in the shaft. His work was not at the place where the accident occurred. The men working near him could not explain why he had gone to the place.

October 22, Hammond Colliery, Martin Mack, American, repairman, was fatally injured. He was throwing a driving rope off a wheel while it was in motion and was caught between the wheel and the rope. He died November 27. Outside.

November 14, Bast Colliery, Edward Lowery, American, laborer, was killed by the rollers. He was employed to watch the rollers. A part of the covering had been removed from them to take coal out, and one of the planks had been put on loose. While he was walking over it, the plank toppled over and his leg was caught in the rollers. Outside.

## CONDITION OF COLLIERIES

### PHILADELPHIA AND READING COAL AND IRON COMPANY

Hammond Colliery.—Ventilation and drainage good; condition as to safety good.

Potts Colliery.—Ventilation and drainage good; condition as to safety good.

Bast Colliery.—Ventilation and drainage fair; condition as to safety fair.

Bear Ridge Colliery.—Ventilation and drainage good; condition as to safety good.

Girard Mammoth Colliery.—Ventilation and drainage fair; condition as to safety fair.

### LEHIGH VALLEY COAL COMPANY

Centralia Colliery.—Ventilation and drainage fair; condition as to safety good.

Packer No. 5 Colliery.—Ventilation and drainage good; condition as to safety good.

### MIDVALLEY COAL COMPANY

Midvalley Colliery.—Ventilation and drainage fair; condition as to safety fair.

### W. R. McTURK COAL COMPANY

Girard Colliery.—Ventilation and drainage good; condition as to safety good.

## Mine Foremen's Examinations

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held at the Court House, Pottsville, April 24 and 25. The board was composed of the following members: James A. O'Donnell, Inspector, Centralia; T. E. Snyder, Superintendent, Wilburton; Peter Haley, Miner, Ashland; Anthony J. McAndrew, Miner, Centralia.

The following persons were recommended for certificates;

### Mine Foreman

Dennis J. Murphy, Girardville.

### Assistant Mine Foremen

David Whitaker, Centralia; Thomas Morgan, Ashland; Peter Kleman, Ashland; William Lex, Wilburton.

## Fifteenth District

NORTHUMBERLAND COUNTY

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Mt. Carmel, Pa., March 18, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Fifteenth Anthracite District for the year ending December 31, 1906.

Respectfully submitted,

BENJAMIN I. EVANS,

Inspector.



## SUMMARY OF STATISTICS

Number of collieries, .....	12
Number of mines, .....	30
Number of mines in operation, .....	24
Number of tons of coal shipped to market, .....	2,045,926
Number of tons used at mines for steam and heat, .....	228,594
Number of tons sold to local trade and used by employes, .....	38,226
Number of tons produced, .....	2,312,746
Number of persons employed inside of mines, .....	4,922
Number of persons employed outside, .....	2,525
Number of fatal accidents inside of mines, .....	15
Number of fatal accidents outside, .....	3
Number of non-fatal accidents inside of mines, .....	14
Number of non-fatal accidents outside, .....	6
Number of tons of coal produced per fatal accident inside, .....	154,183
Number of persons employed per fatal accident inside, .....	328
Number of persons employed per fatal accident outside, .....	842
Number of persons employed per non-fatal accident inside, .....	352
Number of persons employed per non-fatal accident outside, .....	421
Number of wives made widows, .....	9
Number of children orphaned, .....	21
Number of steam locomotives used outside, .....	14
Number of compressed air locomotives used inside, .....	3
Number of electric motors used inside, .....	3
Number of fans in use, .....	23
Number of gaseous mines in operation, .....	4
Number of non-gaseous mines in operation, .....	20
Number of new mines opened, .....	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company, . . . . .	1,023,847
Susquehanna Coal Company, . . . . .	837,532
Greenough Red Ash Coal Company, . . . . .	200,900
Enterprise Coal Company, . . . . .	118,531
Excelsior Coal Company, . . . . .	117,291
White and White, . . . . .	14,645
Total, . . . . .	2,312,746

Production by Counties

Northumberland, . . . . .	2,312,746
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents		Non-Fatal Accidents		Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Total	Inside	Outside	Inside	Outside					
Philadelphia and Reading Coal and Iron Co....	8	.....	8	7	127,981	.....	2,241	898	3,139	280	.....	320	.....
Susquehanna Coal Co., .....	6	2	8	6	139,588	.....	1,756	859	2,615	293	429	293	286
Enterprise Coal Co., .....	1	.....	1	1	118,531	.....	177	214	391	177	.....	.....	214
Excelsior Coal Co., .....	.....	1	1	1	.....	.....	192	103	295	.....	103	192	.....
Lehigh Valley Coal Co., .....	.....	.....	.....	2	.....	.....	207	243	452	.....	.....	.....	132
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	384	26	55	.....	.....	.....	.....
Totals and averages for district, .....	15	3	18	20	154,183	.....	4,922	2,597	7,447	328	842	372	431

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....			1			1	2					1	1	6.67
Falls of slate, .....												1	3	33.34
Mine cars, .....						1				1			2	13.33
Explosions of gas and dust, .....													3	13.33
Explosions of powder and dynamite, .....									1		1		3	13.33
Premature blasts, .....		2					1						3	20.00
Totals, .....		2	1			4	3		1	1	1	2	15	100.00
Causes of Accidents Outside														
Cars, .....												1	1	23.33
Machinery, .....		1											1	33.33
Miscellaneous, .....										1			1	23.34
Totals, .....		1								1		1	3	100.00
Grand totals inside and outside, .....		3	1			4	3		1	2	1	3	18	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, .....							1						1	7.14
Falls of slate, .....	1					1							4	7.14
Mine cars, .....	1		1			1	1						1	28.58
Explosions of gas and dust, .....			1										1	7.14
Explosions of powder and dynamite, .....			1				1				1	1	2	14.28
Premature blasts, .....	1						1						2	14.28
Miscellaneous, .....			1		1				1				3	21.44
Totals, .....	3		3		1	1	3		1		1	1	14	100.00
Causes of Accidents Outside														
Cars, .....	1					1							2	23.24
Machinery, .....		1					1				1		3	30.63
Miscellaneous, .....					1								1	16.66
Totals, .....	1	1			1	1	1				1		6	100.00
Grand totals inside and outside, .....	4	1	3		2	2	4		1		2	1	20	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Miners, .....	1	1	...	...	...	3	...	...	1	...	...	2
Miners' laborers, .....	1	...	...	...	...	...	3	...	...	1	...	5
Drivers and runners, .....	...	...	...	...	...	1	...	...	...	1	...	1
Company men, .....	...	...	...	...	...	...	...	...	...	...	...	1
Totals, .....	2	1	...	...	...	4	3	...	1	1	1	15
<b>Outside</b>												
All other employees, .....	1	...	...	...	...	...	...	...	...	1	...	3
Totals, .....	1	...	...	...	...	...	...	...	...	1	...	3
Grand totals inside and outside, ....	3	1	...	...	...	4	3	...	1	2	1	18

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Miners, .....	3	...	1	...	1	...	2	...	...	...	1	8
Miners' laborers, .....	...	...	1	...	...	...	1	...	...	1	...	3
Drivers and runners, .....	...	...	...	...	...	...	...	1	...	...	...	1
Company men, .....	...	...	1	...	...	1	...	...	...	...	...	1
All other employees, .....	...	...	...	...	...	...	...	...	...	...	...	1
Totals, .....	3	...	3	...	1	1	3	...	1	...	1	14
<b>Outside</b>												
Foremen, .....	...	...	...	...	1	...	...	...	...	1	...	1
Blacksmiths and carpenters, .....	...	...	...	...	1	...	1	...	...	...	...	4
All other employees, .....	1	1	...	...	...	1	1	...	...	...	...	4
Totals, .....	1	1	...	...	1	1	1	...	...	1	...	6
Grand totals inside and outside, ....	4	1	3	...	2	2	4	...	1	...	2	20



TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....			1			1				1		2
Irish, .....		1								1		
German, .....		1				2	2		1		1	
Polish, .....		1										1
Slavonian, .....												
Tyrolcan, .....		1										
Totals, .....		3	1			4	3		1	2	1	3

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
American, .....	1				1	1						
Welsh, .....											1	
Irish, .....							1					
German, .....		1				1	2				1	
Polish, .....	2		1									
Lithuanian, .....									1			
Austrian, .....					1							
Russian, .....												
Prussian, .....	1											
Totals, .....	4	1	3		2	2	4		1		2	1

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Philadelphia and Reading Coal and Iron Co.																
Alaska No. 2, .....	Shaft, .....	Non-gas.	Fan, .....	21	7	6.3	50	2.5	Guibal, .....	.....	1	105,000	101,000	99,800	702	272
Alaska No. 1, .....	Shaft, .....	Non-gas.	Fan, .....	14	4.8	5	54	1.1	Peerless, .....	.....	1	91,800	99,000	89,700	.....	.....
Reliance, East, .....	Slope, .....	Non-gas.	Fan, .....	15	5	5	76	1.2	Guibal, .....	.....	6	60,800	59,100	58,400	313	279
Reliance, West, .....	Slope, .....	Non-gas.	Fan, .....	15	5.6	5.6	82	1	Guibal, .....	.....	6	57,000	84,300	82,500	.....	.....
Reliance Gap, East, .....	Slope, .....	Non-gas.	Fan, .....	18	4.6	4.6	78	1.8	Guibal, .....	.....	4	55,000	53,000	54,000	424	191
Locust Gap, West, .....	Slope, .....	Non-gas.	Fan, .....	12	4	3.6	98	1.5	Guibal, .....	.....	4	29,000	28,000	27,800	.....	.....
Locust Spring No. 1, .....	Slope, .....	Gaseous.	Fan, .....	12	4	3.6	98	1.7	Guibal, .....	.....	3	123,000	127,000	128,000	.....	.....
Locust Spring shaft, .....	Shaft, .....	Gaseous.	Fan, .....	14	4.8	3.7	101	1.7	Guibal, .....	.....	4	120,000	119,500	119,000	602	410
Susquehanna Coal Co.																
Pennsylvania No. 5, .....	Slope, .....	Gaseous.	Fan, .....	14	3.5	3.5	103	1	Volcan, .....	.....	6	45,000	43,000	43,500	.....	.....
Pennsylvania No. 4, .....	Slope, .....	Gaseous.	Fan, .....	18	4.5	4.5	104	1	Mullen, .....	.....	6	62,000	61,000	61,000	720	280
Pennsylvania No. 1, .....	Slope, .....	Gaseous.	Fan, .....	18	3.5	3.5	85	1	Mullen, .....	.....	6	55,000	54,500	55,000	.....	.....
Pennsylvania No. 2, .....	Slope, .....	Gaseous.	Fan, .....	19	3.5	3.5	85	1	Mullen, .....	.....	6	143,000	144,000	143,500	.....	.....
Richards No. 1, .....	Slope, .....	Gaseous.	Fan, .....	19	7.3	7.2	87	2.7	Volcan, .....	.....	6	143,000	144,000	143,500	819	336
Richards No. 2, .....	Slope, .....	Gaseous.	Fan, .....	19	6.8	6.4	81	2.7	Volcan, .....	.....	6	116,400	124,000	117,000	.....	.....
Richards No. 3, .....	Slope, .....	Gaseous.	Fan, .....	19	6.8	6.4	81	2.7	Volcan, .....	.....	6	116,400	124,000	117,000	.....	.....
Richards No. 4, .....	Slope, .....	Non-gas.	Fan, .....	19	4.5	4.5	74	1.7	Mullen, .....	.....	4	26,000	25,000	25,500	.....	.....
Richards No. 5, .....	Slope, .....	Non-gas.	Fan, .....	19	4.5	4.5	120	1.7	Sturtevant, .....	.....	2	26,000	26,000	26,200	.....	.....
Scott, .....	Shaft, .....	Gaseous.	Fan, .....	21	5	5	67	1.1	Mullen, .....	.....	4	52,000	49,000	51,000	217	225
Grenough Red Ash Coal Co.																
Grenough No. 1, .....	Shaft, .....	Non-gas.	Fan, .....	12	3.9	5	85	1.7	Mullen, .....	Steam, ...	3	30,500	29,500	30,000	.....	.....
Grenough No. 2, .....	Shaft, .....	Non-gas.	Fan, .....	12	5	4	106	2	Mullen, .....	Steam, ...	2	31,000	30,000	30,500	.....	.....
Excelsior Coal Co.																
Excelsior, .....	Slope, .....	Non-gas.	Fan, .....	21	5	5	63	1.7	Deadle, .....	Steam, ...	3	62,000	59,000	59,500	191	308











TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co., ....	Northumberland..	940,689	43,232	19,916	1,023,847	3,139	8	7	21,565	267,128	286
Susquehanna Coal Co., .....		712,519	113,893	9,120	834,532	2,615	8	9	11,350	238	
Greenough Red Ash Coal Co., .....		186,984	12,000	1,916	200,900	471	.....	.....	4,457	20	
Enterprise Coal Co., .....		90,815	27,454	262	118,531	331	1	1	3,118	53	
Excelsior Coal Co., .....		109,497	7,080	714	117,291	295	1	1	3,240	60	
White and White, .....		5,412	2,855	6,308	14,615	84	.....	.....	1,200	6	
Lehigh Valley Coal Co., .....		.....	.....	.....	.....	42	.....	.....	560	41	
Totals, .....		2,045,526	228,514	38,226	2,332,716	7,447	18	20	45,870	522,278	712

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Total horse power	Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Steam	Air	Electric								
Philadelphia and Reading Coal and Iron Co., .....	Northumberland,	4	120	48	8,896	9,016	5	3	12,137	76	12,137	21	16,895	13,780	.....	4
Susquehanna Coal Co., .....		.....	.....	46	5,900	5,900	6	.....	7,470	70	7,470	10	10,425	2,850	.....	2
Greenough Red Ash Coal Co., .....		.....	.....	4	600	600	.....	.....	5	5	200	1	250	250	1	.....
Enterprise Coal Co., .....		.....	.....	16	1,900	1,900	.....	3	1,389	14	1,389	4	3,270	1,500	2	.....
Excelsior Coal Co., .....		18	540	.....	.....	540	1	.....	241	7	241	1	600	240	.....	.....
White and White, .....		4	100	1	60	160	.....	.....	180	10	180	.....	.....	.....	.....	.....
Lehigh Valley Coal Co., .....		.....	.....	14	3,275	3,275	2	.....	3,887	30	3,887	6	5,493	2,664	.....	1
Totals, .....	.....	26	790	129	20,631	21,361	14	3	25,504	212	25,504	43	36,333	21,284	3	7



TABLE 3.—Continued

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Pit bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
White and White Columbus No. 2, .....	Northumberland, .....	1	2	...	26	8	6	.....	.....	2	17	62	1	1	1	2	8	.....	1	8	22	84
Lehigh Valley Coal Co. Sayre, .....	Northumberland, .....	1	...	1	11	15	4	.....	6	.....	96	134	.....	1	69	12	.....	.....	2	125	269	343
Stoux, .....		1	2	2	13	12	2	1	4	.....	36	73	.....	1	1	14	.....	.....	.....	20	36	109
Totals, .....		2	2	3	24	27	6	1	10	.....	132	207	.....	2	70	26	.....	.....	2	145	245	352
Grand totals, .....		16	18	56	2,219	660	332	94	60	515	922	4,922	7	16	292	290	662	91	37	1,220	2,535	7,447

TABLE 3.—Recapitulation

Philadelphia and Read- ing Coal and Iron Co., .....	5	2	25	1,050	224	156	55	15	203	456	2,241	...	7	32	110	205	37	13	504	898	3,139
Susquehanna Coal Co., .....	4	3	25	739	276	107	32	28	215	270	1,756	...	3	3	70	94	285	29	14	361	859
Greenough Red Ash Coal Co., .....	Northumberland, .....	1	1	3	148	33	33	2	26	38	287	1	1	8	12	98	2	3	59	184	471
Enterprise Coal Co., .....		2	...	...	90	18	9	3	4	51	...	1	1	12	34	37	24	2	103	391	
Excelsior Coal Co., .....		1	2	...	81	64	15	1	18	9	132	1	1	1	9	12	29	9	2	40	214
White and White, .....		1	2	...	26	8	6	...	...	2	17	62	1	1	1	2	...	...	1	8	22
Lehigh Valley Coal Co., .....	2	2	3	24	27	6	1	10	...	132	207	...	2	70	26	...	...	2	145	245	352
Totals, .....	16	18	56	2,219	680	332	94	60	515	922	4,922	7	16	292	290	662	91	37	1,220	2,525	7,447



TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Philadelphia and Reading Coal and Iron Co.														
Alaska, .....	{ Northumberland.. }	24	23	21	.....	16	24	20	25	19	26	21	22	244
Reliance, .....		23	22	25	.....	14	25	18	26	19	24	21	23	240
Locust Gap, .....		22	21	21	.....	16	25	19	26	19	26	22	22	242
Locust Spring, .....		22	21	21	.....	16	25	19	26	19	26	22	22	242
Susquehanna Coal Co.														
Richards, .....	{ Northumberland.. }	23	21	21	.....	14	20	20	23	22	22	22	18	229
Pennsylvania, .....		22	20	21	.....	15	24	20	21	22	21	20	18	231
Scott, .....		19	16	20	.....	11	19	18	17	17	15	18	15	188
Greenough Red Ash Coal Co.		25	21	26	.....	17	25	24	25	24	26	23	22	258
Greenough, .....	Northumberland, .....													
Enterprise Coal Co.	Northumberland, .....	19	16	21	.....	8	24	17	22	21	24	20	21	213
Excelsior Coal Co.	Northumberland, .....	23	22	24	.....	14	24	19	24	18	25	21	21	235
White and White														
Columbus No. 2, .....	Northumberland, .....	20	20	20	.....	20	20	20	16	19	5	18	14	192

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 16	Danl. Coveley, .....	German, .....	Miner, .....	57	M.	1	.....	Locust Spring, .....	Northumberland, ..	Killed by premature blast.
16	Jul. Bartholdi, .....	Tyrolean, .....	Laborer, .....	35	S.	.....	.....	Locust Spring, .....		Killed by falling into scraper line. Out-
20	Anthony Jacobs, .....	Polish, .....	Jig runner, .....	15	S.	.....	.....	Scott, .....		side.
March 7	John Morgan, .....	American, .....	Miner, .....	55	S.	.....	.....	Locust Spring, .....	Alaska, .....	Killed by fall of slate.
10	Mike Mix, .....	Polish, .....	Miner, .....	50	M.	1	2	Alaska, .....		Killed by fall of slate.
June 9	Enoch Moroski, .....	Polish, .....	Miner, .....	30	M.	1	2	Alaska, .....		Injured by explosion of gas. Died on 28th.
12	Joseph McLaughlin, .....	American, .....	Repairman, .....	51	M.	1	.....	Richards No. 4	Richards, .....	Killed by cars on slope.
12	Bartley Bywood, .....	Polish, .....	Miner, .....	46	M.	1	4	Richards, .....		Injured by explosion of gas. Died on 21st.
July 6	Theodore Carlovitch, .....	Polish, .....	Laborer, .....	20	S.	.....	.....	Pennsylvania, .....		Killed by fall of slate.
13	Mike Povlick, .....	Slavonian, .....	Laborer, .....	21	S.	.....	.....	Richards No. 4	Richards, .....	Killed by fall of slate.
27	Mike Loskoski, .....	Polish, .....	Laborer, .....	28	M.	1	.....	Richards No. 4		Killed by premature blast.
Sept. 21	Mike Topolski, .....	Polish, .....	Miner, .....	27	M.	1	2	Enterprise, .....		Killed by being shot.
Oct. 12	Walter Hodget, .....	American, .....	Driver, .....	18	S.	.....	.....	Reliance, .....	Richards, .....	Killed by being run over by a loaded trip of cars.
19	John McManamin, .....	Irish, .....	Laborer, .....	60	S.	.....	.....	Richards, .....		Killed by being struck by a piece of timber.
Nov. 12	Joseph Cavatski, .....	Polish, .....	Laborer, .....	18	S.	.....	.....	Alaska, .....	Richards, .....	Killed by explosion of powder.
Dec. 6	George Hohl, .....	American, .....	Miner, .....	50	M.	1	7	Alaska, .....		Killed by fall of slate.
10	Anthony Tomavitch, .....	Polish, .....	Miner, .....	36	M.	1	5	Richards, .....	Richards, .....	Killed by fall of slate.
24	John Golden, .....	American, .....	Laborer, .....	20	S.	.....	.....	Excelsior, .....		Killed by being bumped between cars. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation		Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 8	Cyrus Tushlski, .....	Prussian, .....	Miner, .....	45	S.	Alaska, .....			(Shoulder dislocated by being struck by a car. Injured internally. While running away from a shot he failed to get to a place of safety and was struck by a piece of coal.
8	Adam Turowlitch, .....	Polish, .....	Miner, .....	50	M.	Bellevue, .....			
23	Albert Osman, .....	American, .....	Fireboss, .....	38	M.	Steen, .....			Injured about body. While taking out rock on a dumper he slipped and fell under the dumper. Outside. Leg broken. While tearing up sheet iron in a breast a piece of slate fell on his leg.
24	John Homerock, .....	Polish, .....	Miner, .....	45	M.	Evesham, .....			
Feb. 27	Joe, Hammerick, .....	Polish, .....	Other, .....	19	S.	Richards, .....			Arm severed at the wrist. While oiling the trolley wheels under the bottom floor and the breaker he slipped and his arm was caught between the rope and pulley wheel. Outside. Ankle broken. While trying to get on the accommodation car in the slope he fell under it. Burned by gas. He went up a chute with a naked light on his head, after firing a shot, and ignited a small body of gas.
March 20	Anthony Gelniski, .....	Lithuanian, .....	Loader, .....	22	S.	Locust Gap, .....			
24	Wm. Shecavitch, .....	Lithuanian, .....	Miner, .....	40	M.	Richards, .....			Leg broken. While loading a car at face of breast a lump of coal rolled on his leg. Leg broken by a piece of coal which rolled down the chute and struck him.
May 21	Nick. Haulcouik, .....	Russian, .....	Miner, .....	40	M.	Richards, .....			
25	Daniel Fisher, .....	American, .....	Carpenter, ....	35	M.	Sayre, .....			Leg broken by being caught between two pieces of timber. Outside. Ankle broken and otherwise injured. The rope broke on the slope and the cars ran back to the bottom of slope and struck him.
June 8	John Horn, .....	American, .....	Bottom man, ..	24	S.	Richards, .....			

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
June 18	Henry Deer, .....	Polish, .....	Car loader, .....	37	M.	Pennsylvania, .....		While barring a railroad car under the breaker another car came down after him and struck him, driving the bar into his body, tearing him open and exposing his testicles. Outside.
July 16	Wally Reese, .....	Polish, .....	Miner, .....	35	M.	Richards, .....		Leg broken by fall of coal.
21	Nick Mader, .....	German, .....	Laborer, .....	25	S.	Locust Gap, .....		Internally injured. While standing on high side of gangway near a chute the empty trip of cars caught him against the chute.
26	William Coyne, .....	Irish, .....	Pumpman, ....	17	S.	Enterprise, .....		Legs broken. While running around the breaker at dinner time he fell into the scraper line. Outside.
27	Steve Harnish, .....	Polish, .....	Miner, .....	30	M.	Richards No. 4, .....		Severely injured. While tamping a rock hole with a steel bar the blast went off.
Sept. 17	John Penamonte, .....	Austrian, .....	Spragger, ....	18	S.	Pennsylvania, .....	Northumberland, ..	Arm broken by being caught between top of car and collar.
Nov. 12	Alex. Slabinski, .....	Polish, .....	Laborer, .....	20	S.	Alaska, .....		Burned by explosion of powder. While making a cotton for his lamp, a spark fell into a keg of powder that had been carelessly left open.
19	Evan. John, .....	Welsh, .....	Foreman, ....	42	M.	Scott, .....		While trying to start an engine that was stuck on centre, his arm was caught between the pinion and spur wheel and was so badly mashed that it had to be amputated. Outside.
Dec. 14	Andrew Shuda, .....	Polish, .....	Miner, .....	36	M.	Reliance, .....		Hand blown off and otherwise injured. While putting a hole in a stick of dynamite it exploded.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

March 10, Locust Spring Colliery, John Morgan, American, miner, was killed by a fall of slate while sinking a prop hole.

June 7, Alaska Colliery, Mike Mix, Polish, miner, was killed by fall of slate while making room for a prop.

July 6, Pennsylvania Colliery, Theodore Carlovitch, Polish, laborer, was killed by fall of slate while shoveling coal at face of breast. This accident was caused by the miner neglecting to timber his working place.

July 13, Richards No. 4 Colliery, Mike Povlick, Slavonian, laborer, was killed by fall of slate while shoveling coal at face of gangway. This was caused by neglect on the part of the miner.

December 6, Alaska Colliery, George Hohl, American, miner, was killed by fall of coal while dressing off a shot. This accident could have been avoided had he stood aside, near the face, instead of in front of the piece that fell on him.

December 10, Richards Colliery, Anthony Tomcavitch, Polish, miner, was killed by fall of slate. After firing a shot he returned to face of breast and, while standing on top of manway, a piece of slate fell on him.

June 12, Richards No. 4 Colliery, Joseph McLaughlin, American, repairman, was killed by being struck by a trip of cars on the slope.

October 12, Reliance Colliery, Walter Hodget, American, driver, was killed by being run over by a loaded trip of cars.

December 24, Excelsior Colliery, John Golden, American, laborer, was killed by being bumped between cars. Outside.

## Explosions of Gas

June 9, Alaska Colliery, Enoch Moroski, Polish, miner, was fatally injured by an explosion of gas. He died June 28. He was driving a heading into an old breast and went up the breast to rap to his fellow workman. He encountered a body of gas which he exploded with a naked light that he had on his hat. He had been forbidden to enter that breast.

June 12, Richards Colliery, Bartley Bywood, Polish, miner, was killed by an explosion of gas. He fired a shot that put his lamp out, and when he struck a match to light it he ignited a body of traveling gas that issued from the face of the breast. He was burned so badly that he died June 21.

## Powder and Dynamite

November 12, Alaska Colliery, Joseph Cavatski, Polish, laborer, was making a cotton for his lamp when a spark fell into a keg of powder, causing an explosion. He was burned so badly that he died on the 20th.

## Premature Blasts

February 16, Locust Spring Colliery, Daniel Covley, German, miner, was instantly killed by a blast. While tamping a hole with an iron bar the blast went off.

February 16, Locust Spring Colliery, Jule Bartholdi, Tyrolean, laborer, was killed by the same blast that killed Daniel Covley.



July 27, Richards No. 4 Colliery, Mike Loskoski, Polish, laborer, was instantly killed by premature blast. While helping his fellow-workman to tamp a hole with an iron bar, the shot went off. This was a case of disobeying the mine law. At the inquest the miner was severely censured, prosecuted, and imprisoned for one month.

September 21, Enterprise Colliery, Mike Topolski, Polish, miner, was killed by a shot. He had lighted two shots but only one exploded. When he went back to the face of the breast, the other shot exploded, killing him instantly.

### Machinery

February 20, Scott Colliery, Anthony Jacobs, Polish, jig runner, while playing around the breaker instead of being at work, fell into the scraper line and was killed. Outside.

### Miscellaneous

October 19, Richards Colliery, John McManamin, Irish, laborer, was killed by a piece of timber rolling on him. Outside.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

### PHILADELPHIA AND READING COAL AND IRON COMPANY

Alaska Colliery.—The sanitary condition of colliery is good.

Reliance Colliery.—Sanitary condition of colliery is fairly good.

Locust Gap Colliery.—Ventilation is fairly good, and roads are in fairly good condition.

Locust Spring Colliery.—Sanitary condition of colliery is fairly good.

### SUSQUEHANNA COAL COMPANY

Richards Colliery.—Ventilation is fairly good; but the road beds are in bad condition.

Pennsylvania Colliery.—Sanitary condition of colliery is excellent.

Scott Colliery.—Sanitary condition of colliery is good.

### GREENOUGH RED ASH COAL COMPANY

Greenough Colliery.—Sanitary condition of colliery is good.

### ENTERPRISE COAL COMPANY

Enterprise Colliery.—Sanitary condition of colliery is fairly good.

### EXCELSIOR COAL COMPANY

Excelsior Colliery.—Sanitary condition of colliery is fairly good.

### LEHIGH VALLEY COAL COMPANY

#### Sayre Shaft

The breaker has a capacity of 1,800 tons for nine hours, and contains 32 Standard Lehigh Valley jigs; 8 on Egg, 8 on Stove, 8 on Chestnut, 4 on Pea, and 4 on Buckwheat; also 35 shakers, and two Anthracite spiral separators

The machinery in the breaker, other than the jigs, is run by a 450 horse-power 21 and 31 inch by 36 inch Cross Compound engine, made by the Vulcan Iron Works, of Wilkes-Barre. The jigs are run by a Hamilton Corliss Tandem Compound engine, of 150 horse-power, size 12x18x36 inches.

The coal is fed into the breaker by a carrying conveyor line, the buckets of which are 3 foot 5 inches by 22 inches by 12½ inches. The coal is dumped into this line directly from the cars by means of self-dumping carriages on the shaft.

The boiler plant consists of seven 300 horse-power Stirling boilers, equipped with forced fan and Cochran feed water heater.

The shaft has six compartments, four of which are used for hoisting coal, one for air, and one small compartment for electric wires, signal apparatus, pipes, etc.

The shaft engine house is a brick building, with concrete foundations, 48 feet 6 inches by 100 feet, and contains the two hoisting engines and the electric generator. The south pair of hoisting engines hoist the coal from the first and second lifts, and consists of a pair of 26 inch by 48 inch engines, conical drum and friction clutch; the drums are 8 feet 6 inches in diameter, to 10 feet 6 inches. The north hoisting engine, which will hoist all the coal from the third lift, is a pair of 30 inch by 48 inch engines, with conical drum and friction clutch, diameter of drum 10 feet to 14 feet.

The dimensions of the shaft at the surface and to the first lift is 49 feet 2 inches by 12 feet 6 inches inside of the timbers; the depth to the first lift, from rail to rail, is 231 feet. The dimension of the shaft from the first to the second lift inside of timber, is, length 40 feet 10 inches by 12 feet 6 inches, and the distance is 196 feet. From the second to the third lift, the dimensions of the shaft are, length 24 feet 2 inches by 12 feet 6 inches inside of timber, and the depth 162 feet, making the total depth of the shaft 589 feet.

At the first lift of the shaft there is installed a 24 inch and 42 inch by 14 inch by 48 inch Compound Condensing Worthington pump. This pump delivers water directly to the breaker, or to a dam located east of the breaker, from which point it will run by gravity to the breaker.

The mine will be ventilated by a 20 foot Guibal fan, directly connected to the north compartment of the shaft. The fan house is built entirely of concrete, with the exception of the roof, and the fan is run by a 16 inch by 36 inch Corliss engine.

Tunnels have been driven from the south side of the basin to the shaft on the first and second lifts. The first lift tunnel will be continued across the basin, to the south dip, and it is the intention to extend a tunnel across the basin at the third lift.

The main haulage will be done with electricity, two motors being installed on the first and one on the second lift. Other motors will be added as transportation makes it necessary. These are 7½-ton Baldwin-Westinghouse motors, and the power is supplied by a 175 K. W. generator, located in the main engine house. This generator is directly connected to a McEwen 17 inch and 28 inch by 20 inch Tandem Compound engine. This generator also supplies power for the feed to the main conveyor line, which is driven with a 15 horse-power motor, and for the 25 horse-power motor that will drive the empty car hoist at the first lift.

For the present the coal from Sioux No. 1 and No. 3 collieries will be hauled overland to Sayre colliery by two locomotives. The sanitary condition of the colliery is good.

#### Mine Foremen's Examinations

At the examination held at Pottsville April 27 and 28 the following candidate was recommended for a certificate of qualification:

Assistant Mine Foreman

Jacob Kleman.

## Sixteenth District

---

NORTHUMBERLAND COUNTY

Shamokin, Pa., March 13, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector for the Sixteenth Anthracite District for the year ending December 31, 1906.

Respectfully submitted,

MARTIN McLAUGHLIN,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries, .....	13
Number of mines, .....	40
Number of mines in operation, .....	40
Number of tons of coal shipped to market, .....	2,114,954
Number of tons used at mines for steam and heat, .....	295,667
Number of tons sold to local trade and used by employes, .....	69,041
Number of tons produced, .....	2,479,662
Number of persons employed inside of mines, .....	4,663
Number of persons employed outside, .....	2,620
Number of fatal accidents inside of mines, .....	17
Number of fatal accidents outside, .....	4
Number of non-fatal accidents inside of mines, .....	79
Number of non-fatal accidents outside, .....	16
Number of tons of coal produced per fatal accident inside, .....	145,862
Number of persons employed per fatal accident inside, ..	274
Number of persons employed per fatal accident outside, ..	655
Number of persons employed per non-fatal accident inside, .....	59
Number of persons employed per non-fatal accident outside, .....	164
Number of wives made widows, .....	10
Number of children orphaned, .....	23
Number of steam locomotives used outside, .....	18
Number of electric motors used inside, .....	2
Number of fans in use, .....	32
Number of gaseous mines in operation, .....	21
Number of non-gaseous mines in operation, .....	19
Number of new mines opened, .....	2



TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company.....	1,166,306
Mineral Railroad and Mining Company,.....	575,990
Susquehanna Coal Company,.....	336,117
Buck Ridge Coal Company,.....	133,986
Shipman Coal Company,.....	113,516
Excelsior Coal Company,.....	104,640
Llewellyn Mining Company,.....	47,495
Trevorton Coal Land Company,.....	1,612
Total, .....	<u>2,479,662</u>

## Production by Counties

Northumberland, .....	<u>2,479,662</u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co., ..	9	2	11	28	9	37	129,740	41,624	2,193	1,112	3,325	244	571	78	127
Mineral Railroad and Mining Co., ..	5	.....	5	22	1	23	115,158	26,181	1,349	323	1,918	270	.....	61	569
Susquehanna Coal Co., ..	2	.....	2	8	4	12	168,058	42,915	1,582	323	1,905	291	.....	73	106
Buckridge Coal Co., ..	.....	1	1	13	1	14	.....	10,367	164	123	268	.....	104	13	104
Shinnston Coal Co., ..	.....	.....	.....	5	1	6	.....	22,703	81	189	276	.....	.....	17	189
Excelsior Coal Co., ..	1	.....	1	5	.....	2	161,640	52,320	165	72	237	165	.....	82	.....
Llewellyn Mining Co., ..	.....	1	1	1	.....	1	.....	47,495	100	93	193	.....	93	100	.....
Miscellaneous companies, ..	.....	.....	.....	.....	.....	.....	.....	.....	24	28	52	.....	.....	.....	.....
Totals and averages for district, ..	17	4	21	79	16	95	145,862	31,388	4,663	2,620	7,283	274	655	59	164

Names of Operators

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....						1	1			1			3	11.77
Falls of slate, .....			1			1					1		3	17.65
Falls of roof, .....			3				1		1			2	6	35.29
Mine cars, .....		2						1		1			4	23.53
Explosions of gas and dust, .....							1						1	5.88
Falling into slopes, etc., .....						1							1	5.88
Totals, .....		2	3			2	3	1	1	2	1	2	17	100.00
Causes of Accidents Outside														
Cars, .....		1										1	2	50.00
Machinery, .....			1										1	25.00
Boiler explosions, .....				1									1	25.00
Totals, .....		1	1	1								1	4	100.00
Grand totals inside and outside, ....		3	4	1		2	3	1	1	2	1	3	21	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....	12		12		1	1	2		1		3	1	13	16.45
Falls of slate, .....	1	1				1	1	6	4	1		3	19	24.05
Mine cars, .....	1	1	12		12		1	3	2		3	1	16	20.25
Explosions of gas and dust, .....		12			12		3	1		1		1	16	20.25
Explosions of powder and dynamite, .....							1						1	1.27
Premature blasts, .....	1	1			1	1	3		1		1		9	11.39
Falling into slopes, etc., .....			1					1					2	2.53
By mules, .....							1						1	1.27
Machinery, .....				1									1	1.27
Miscellaneous, .....			1										1	1.27
Totals, .....	5	5	8	1	7	5	13	11	8	2	8	6	79	100.00
Causes of Accidents Outside														
Cars, .....						1	1		2				4	25.00
Machinery, .....			1							2	1		4	25.00
Boiler explosions, .....				1									1	6.25
Miscellaneous, .....	1	1			1			2		1	1		7	43.75
Totals, .....	1	1	1	1	1	1	1	2	2	3	2		16	100.00
Grand totals inside and outside, .....	6	6	9	2	8	6	14	13	10	5	10	6	95	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Miners, .....			2			2	3		1	1	1	1
Miners' laborers, .....			1					1				1
Drivers and runners, .....		1								1		
Company men, .....		1										
Totals, .....		2	3			2	3	1	1	2	1	2
<b>Outside</b>												
Engineers and firemen, .....				1								
Statepickers (boys), .....											1	
All other employees, .....		1	1									
Totals, .....		1	1	1							1	
Grand totals inside and outside, .....		3	4	1		2	3	1	1	2	1	3

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months											
	January	February	March	April	May	June	July	August	September	October	November	December
<b>Inside</b>												
Fire bosses and assistants, .....								1				
Miners, .....	2	4	1		4	5	11	5	6	2		5
Miners' laborers, .....	1				1		1	2	1			
Drivers and runners, .....	1				1			2				
Boorboys and helpers, .....			1				1					
Pumpmen, .....					1				1			
Company men, .....												
All other employees, .....												
Totals, .....	4	5	2	1	7	5	13	11	8	2	2	6
<b>Outside</b>												
Engineers and firemen, .....			1						1			
Statepickers (boys), .....								2			1	
All other employees, .....	1	1		1	1	1	1		1	3	1	
Totals, .....	1	1	1	1	1	1	1	2	2	3	2	
Grand totals inside and outside, .....	6	6	3	2	8	6	14	13	10	5	3	6

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	...	...	...	...	...	1	1	1	...	1	...	...	6
German, .....	...	...	...	...	...	...	...	...	...	...	...	...	1
Polish, .....	...	...	...	...	...	...	...	...	1	1	...	...	6
Austrian, .....	...	...	...	...	...	...	...	...	...	...	1	2	2
Russian, .....	...	...	1	...	...	1	1	...	...	...	1	...	4
Greek, .....	...	...	...	1	...	...	...	...	...	...	...	...	1
Bohemian, .....	...	...	...	...	...	...	1	...	...	...	...	...	1
Totals, .....	3	4	1	...	...	2	3	1	1	2	1	3	21

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	2	2	4	1	2	2	4	2	6	1	4	2	34
English, .....	..	..	..	..	..	..	..	..	..	..	1	..	1
Welsh, .....	..	..	..	1	..	..	..	..	..	..	..	..	1
Scotch, .....	..	..	..	..	..	..	..	..	..	..	..	..	4
Irish, .....	..	2	..	..	1	..	..	1	..	..	..	..	3
German, .....	..	..	..	..	1	1	1	..	1	..	2	..	5
Polish, .....	1	2	..	..	2	1	6	4	..	1	..	4	20
Hungarian, .....	..	..	..	..	..	..	..	1	..	..	..	..	1
Italian, .....	..	..	..	..	..	..	3	1	..	..	1	..	5
Slavonian, .....	..	..	..	..	..	..	..	1	..	..	..	..	1
Austrian, .....	..	..	..	..	1	..	..	..	..	..	..	..	1
Russian, .....	2	..	..	..	2	2	..	1	..	2	1	..	10
French, .....	..	..	..	..	..	..	..	..	1	..	..	..	1
Totals, .....	6	6	9	1	8	6	14	13	10	5	10	6	95



TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed in—	Average number of cubic feet per minute provided for each person
Philadelphia and Reading Coal and Iron Co.																
Bear Valley No. 1.	Shaft.....	Gaseous.	Fan.....	18	5.9	4.9	115	2.2	Guibal.	Steam.....	5	41,100	43,050	45,720	322	363
Bear Valley No. 2.	Shaft.....	Gaseous.	Fan.....	15	3.11	3.6	90	2	Guibal.	Steam.....	7	75,600	75,420	77,740		
Big Mountain No. 1.	Slope.....	Gaseous.	Fan.....	12	4	3.6	120	1.4	Guibal.	Steam.....	1	41,000	40,000	43,000	308	269
Big Mountain No. 2.	Slope.....	Gaseous.	Fan.....	18	6	5.5	60	1.5	Guibal.	Steam.....	1	2,000	1,800	2,100		
Big Mountain No. 3.	Slope.....	Gaseous.	Fan.....	18	6	5.5	62	1.2	Guibal.	Steam.....	3	43,600	41,000	45,000		
Burnside No. 1.	Shaft.....	Gaseous.	Fan.....	15	4	3	85	1.1	Guibal.	Steam.....	8	30,990	31,110	31,375	118	533
Burnside No. 2.	Shaft.....	Gaseous.	Fan.....	15	4	3	85	1.1	Guibal.	Steam.....	3	31,475	31,800	32,500	169	257
Burnside.	Drift.....	Non-gas.	Fan.....	15	4.2	3.6	38	1.4	Guibal.	Steam.....	4	29,000	28,000	31,000	290	347
Henry Clay No. 1.	Shaft.....	Gaseous.	Fan.....	21	7	6.3	70	1.8	Guibal.	Steam.....	1	68,000	67,000	69,000	169	257
Henry Clay No. 2.	Shaft.....	Gaseous.	Fan.....	18	6	5.4	70	1.8	Guibal.	Steam.....	8	34,750	33,680	36,420	290	347
North Franklin No. 1.	Drift.....	Non-gas.	Fan.....	18	5	5	75	1.9	Guibal.	Electricity.	3	90,000	75,760	82,000	493	348
North Franklin No. 2.	Slope.....	Gaseous.	Fan.....	18	5	5	75	1.1	Guibal.	Steam.....	3	77,000	70,000	73,000	493	348
North Franklin No. 3.	Slope.....	Non-gas.	Fan.....	15	5	5.1	51	1.1	Guibal.	Electricity.	3	56,400	53,800	57,000	493	348
Stirling No. 1.	Slope.....	Gaseous.	Fan.....	18	6	5.4	78	1.8	Guibal.	Steam.....	3	27,231	26,200	28,500	228	363
Stirling No. 2.	Slope.....	Gaseous.	Fan.....	21	7.2	6.4	60	1	Guibal.	Steam.....	4	24,354	27,500	31,000	228	363
Stirling No. 3.	Slope.....	Gaseous.	Fan.....	15	4.6	4.3	65	1	Guibal.	Steam.....	4	30,616	29,000	32,000	228	363
Mineral Railroad and Mining Co.																
Cameron No. 1.	Slope.....	Gaseous.	Fan.....	14	4	4	120	1.4	Guibal.	Steam.....	6	58,795	22,500	59,795	414	318
Cameron No. 2.	Slope.....	Gaseous.	Fan.....	18	7	5.3	80	1.7	Guibal.	Steam.....	7	81,500	45,000	82,500	414	318
Cameron No. 3.	Slope.....	Gaseous.	Fan.....	16	6	5.2	76	2.6	Guibal.	Steam.....	7	33,750	28,000	34,750	414	318
Cameron No. 4.	Shaft.....	Gaseous.	Fan.....	16	6	5.2	90	2	Guibal.	Steam.....	9	40,320	36,000	41,320	475	290
Luke Fidler No. 1.	Shaft.....	Gaseous.	Fan.....	18	7	5.2	84	1.6	Guibal.	Steam.....	6	60,149	58,976	61,284	475	290
Luke Fidler No. 2.	Shaft.....	Gaseous.	Fan.....	18	7	5.2	106	2.4	Guibal.	Steam.....	5	80,769	78,694	82,067	475	290

Susquehanna Coal Co.															
Hickory Ridge No. 1.	Slope.....	Non-gas.	Fan.....	15	4.10	4.8	80	1	Guibal. .. Steam.....	5	38,000	32,000	40,000	340	371
Hickory Ridge No. 2.	Slope.....	Non-gas.	Fan.....	18	7	5.6	60	.9	Vulcan. .. Steam.....	3	57,750	46,000	59,750		
Hickory Ridge No. 3.	Drift.....	Non-gas.	Fan.....	12	4	3.10	90	.8	Vulcan. .. Steam.....	2	36,000	34,000	37,000	230	269
Hickory Ridge No. 4.	Drift.....	Non-gas.	Fan.....	6	2.3	1.5	75	.5	Sturtevant. Steam.....	1	15,000	14,000	16,000		
Hickory Swamp.	Slope.....	Non-gas.	Fan.....	16	5.5	4.5	56	2.5	Mullen. .. Steam.....	4	54,750	61,980	65,870		
Buck Ridge Coal Co.															
Buck Ridge No. 1.	Slope.....	Gaseous.	Fan.....	14	4.6	4.6	90	1.1	Pellock. .. Steam.....	4	42,000	41,000	43,000	164	354
Buck Ridge No. 2.	Drift.....	Non-gas.	Fan.....	12	3.6	3.6	90	.8	Guibal. .. Steam.....	4	18,000	17,100	19,200		
Shipman Coal Co.															
Colbert.	Shaft.....	Non-gas.	Fan.....	16	5	4	65	.5	Guibal. .. Steam.....	2	25,015	25,500	27,000	86	297
Excelsior Coal Co.															
Corbin No. 1.	Slope.....	Non-gas.	Fan.....	16	5	5	75	1.6	Beadle. .. Steam.....	2	20,000	18,000	20,500	165	212
Corbin No. 2.	Slope.....	Non-gas.	Fan.....	14	5	5	75	1.7	Beadle. .. Steam.....	2	18,000	17,000	18,500		
Llewellyn Mining Co.															
Royal Oak.	Slope.....	Non-gas.	Fan.....	18	4.9	4.10	70	2.5	Guibal. .. Steam.....	3	14,000	13,000	14,500	64	203

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Bear Valley, .....						
Big Mountain, .....						
Burnside, .....						
Henry Clay, .....						
North Franklin, .....						
Stirling, .....	Northumberland, ..	W. J. Richards, ...	Pottsville, .....	Reese Tasker, .....	Pottsville, .....	P. and R.
Mineral Railroad and Mining Co.						
Cameron, .....	Northumberland, ..	Robert A. Quin, ...	Wilkes-Barre, ...	E. A. Rhoads, .....	Shamokin, .....	Pennsylvania
Luke Fidler, .....						
Susquehanna Coal Co.						
Hickory Ridge, .....	Northumberland, ..	Robert A. Quin, ...	Wilkes-Barre, ...	W. R. Reinhardt, ...	Shamokin, ...	Pennsylvania
Hickory Swamp, .....						
Buck Ridge Coal Co.						
Buck Ridge No. 2, .....						
Buck Ridge washery, .....	Northumberland, ..	.....	.....	D. H. McGee, .....	Shamokin, .....	P. and R.
Shipman Coal Co.						
Colbert, .....	Northumberland, ..	John B. Corliss, ...	Detroit, Mich., ...	E. J. Corliss, .....	Shamokin, .....	Pennsylvania
Excelsior Coal Co.						
Corbin, .....	Northumberland, ..	Andrew Robertson, ..	Shamokin, .....	George W. Robertson, ..	Shamokin, .....	P. and R. and Pennsylvania
Llewellyn Mining Co.						
Royal Oak, .....	Northumberland, ..	Wm. H. Llewellyn, ..	Shamokin, .....	.....	.....	P. and R.
Trevorton Coal Land Co.						
New operation, .....	Northumberland, ..	.....	.....	E. R. Shurtleff, ...	Trevorton, ...	

\*Not yet named



TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Colbert, Shipman Koal Co.	Northumberland..	101,056	10,620	1,840	113,516	260	375	.....	6	850	4,000	30
Corbin, Excelsior Coal Co.	Northumberland..	92,650	12,590	.....	104,640	229	37	1	2	2,735	1,200	21
Royal Oak, Llewellyn Mining Co.	Northumberland..	36,750	7,290	3,545	47,495	240	193	1	1	1,169	400	22
New operation,* Trevorton Coal Land Co.	Northumberland..	.....	1,014	598	1,612	35	52	.....	.....	100	16,500	12
Grand totals, .....	.....	2,114,954	295,667	69,041	2,479,662	.....	7,285	21	95	50,519	223,721	789

\*Not yet named.

TABLE 2.—Recapitulation

Philadelphia and Reading Coal and Iron Co.,	1,011,928	128,697	25,681	1,166,306	.....	5,335	11	37	23,485	115,211	377
Mineral Railroad and Mining Co., .....	482,672	62,268	31,050	575,990	.....	1,918	5	23	13,449	52,888	221
Suckerman Coal Co., .....	286,091	64,218	5,898	336,117	.....	1,005	2	12	6,030	28,022	91
Buck Ridge Coal Co., .....	124,407	9,060	1,519	133,986	.....	268	1	14	2,700	5,500	15
Shipman Coal Co., .....	19,630	19,630	1,840	113,516	.....	275	.....	6	850	4,000	30
Excelsior Coal Co., .....	92,650	12,590	.....	104,640	.....	37	1	2	2,735	1,200	21
Llewellyn Mining Co., .....	36,750	7,290	3,545	47,495	.....	193	1	1	1,169	400	22
Trevorton Coal Land Co., .....	.....	1,014	598	1,612	.....	52	.....	.....	100	16,500	12
Totals, .....	2,114,954	295,667	69,041	2,479,662	.....	7,285	21	95	50,519	223,721	789



TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Philadelphia and Reading Coal and Iron Co.	Northumberland.	4	120	63	7,780	7,800	5	.....	2	11,375	27	25,056	15,450	3	3
Mineral Railroad and Mining Co., .....		2	40	33	4,315	4,335	5	.....	.....	6,281	11	2,768	4,738	3	3
Susquehanna Coal Co., .....		.....	.....	22	2,940	2,940	5	.....	.....	24,085	1	5,480	2,470	1	.....
Suck Ridge Coal Co., .....		.....	.....	7	1,050	1,050	1	.....	.....	1,085	1	500	400	.....	.....
Stapanian Coal Co., .....		.....	.....	.....	170	640	.....	.....	.....	195	2	1,700	850	.....	.....
Stapanian Coal Co., .....		26	640	.....	640	640	1	.....	.....	296	.....	488	259	.....	.....
Levellyn Mining Co., .....		.....	.....	3	150	450	.....	.....	.....	400	1	250	150	.....	.....
Trevorton Coal Land Co., .....		.....	.....	1	150	150	1	.....	.....	.....	.....	.....	.....	.....	1
Totals, .....		26	800	136	17,155	17,955	13	.....	2	21,903	55	38,202	24,708	4	10



Buck Ridge Coal Co.	1	2	101	19	8	1	2	23	8	104	1	1	2	7	12	4	1	37	61	227
Buck Ridge No. 2	1	2	101	19	8	1	2	23	8	104	1	1	2	7	12	4	1	37	61	227
Buck Ridge washery	1	2	101	19	8	1	2	23	8	104	1	1	2	7	12	4	1	37	61	227
Totals	1	2	101	19	8	1	2	23	8	104	1	1	2	7	12	4	1	37	61	227
Excelsior Coal Co.	1	2	SS	34	11	...	1	17	11	165	1	1	5	11	12	2	...	40	72	237
Corbin	1	2	SS	34	11	...	1	17	11	165	1	1	5	11	12	2	...	40	72	237
Llewellyn Mining Co.	1	1	2	60	15	2	...	4	13	...	1	1	3	7	35	8	2	36	93	193
Royal Oak	1	1	2	60	15	2	...	4	13	...	1	1	3	7	35	8	2	36	93	193
Trevorton Coal Land Co.	1	...	7	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
New operation,*	1	...	7	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grand totals	16	18	63	2,097	836	311	69	376	897	4,663	8	19	131	299	765	109	46	1,279	2,620	7,283

\*Not yet named.

TABLE 3.—Recapitulation

Philadelphia and Reading Coal and Iron Co.	7	2	29	950	457	119	33	13	299	373	2,193	...	9	42	109	265	76	17	644	1,142	3,335
Mineral Railroad and Mining Co.	1	2	8	537	196	102	29	8	33	352	1,349	1	3	31	65	222	15	13	251	569	1,918
Susquehanna Coal Co.	1	5	6	263	111	36	5	9	63	82	582	2	2	29	49	161	70	9	151	423	1,005
Shippensburg Coal Co.	1	...	2	21	13	3	1	3	28	4	186	1	1	1	15	58	5	2	102	189	975
Buck Ridge Coal Co.	1	...	2	101	19	8	1	3	23	8	164	1	1	2	11	19	4	2	68	104	258
Excelsior Coal Co.	1	...	2	SS	34	11	...	1	17	11	165	1	1	5	11	12	2	...	40	72	237
Llewellyn Mining Co.	1	1	1	60	15	2	...	4	13	...	100	1	1	3	7	35	8	2	36	93	193
Trevorton Coal Land Co.	1	...	7	9	...	...	...	...	...	...	24	1	...	...	...	...	...	...	17	28	52
Totals	16	18	63	2,097	836	311	69	40	376	897	4,663	8	19	131	299	765	109	46	1,279	2,620	7,283

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.	{ Northumberland,	24	18	25	.....	17	25	19	25	19	14	22	23	231
North Franklin, .....		23	19	25	.....	17	26	20	25	18	11	16	22	232
Bear Valley, .....		24	19	24	.....	16	26	20	26	18	14	22	22	241
Burnside, .....														
Sirling, .....														
Henry Clay, .....	{ Northumberland,	20	21	25	.....	16	25	19	25	19	25	22	22	239
Big Mountain, .....														
Mineral Railroad and Mining Co.	{ Northumberland,	24	22	25	.....	12	24	22	23	21	22	21	19	235
Cameron, .....		23	21	24	.....	11	23	21	25	18	22	20	18	224
Lake Fidler, .....														
Susquehanna Coal Co.	{ Northumberland,	22	21	24	.....	14	22	22	23	22	23	22	19	234
Hickory Ridge, .....		20	18	22	.....	9	19	19	20	17	21	19	18	202
Hickory Swamp, .....														
Buck Ridge Coal Co.	Northumberland,	23	22	24	.....	14	23	22	24	22	26	22	18	240
Buck Ridge No. 2, .....														
Shipman Coal Co.	Northumberland,	26	24	26	.....	15	25	25	25	23	24	24	23	260
Colbert, .....														
Excelsior Coal Co.	Northumberland,	24	21	25	.....	14	25	18	24	17	22	20	19	229
Corbin, .....														
Llewellyn Mining Co.	Northumberland,	22	19	23	3	17	24	21	22	23	21	23	22	240
Royal Oak, .....														
Trevorton Coal Land Co.	Northumberland,													
New operation,* .....														
														35

\*Not yet named.

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Feb.	1 Harry Stepp, .....	American, .....	Loader, ....	27 M.	1	2		Burnside, .....	Northumberland, ..	Instantly killed between a derailed car and the gangway timber.
10	Raymond Brightbill, ..	American, .....	Car runner, ..	17 S.	.....	.....		Cameron, .....	Northumberland, ..	Instantly killed between top rail of car and roof.
19	Charles Hemming, ....	German, .....	Laborer, ....	70 M.	1	.....		Royal Oak, .....	Northumberland, ..	Instantly killed by being caught between a derailed car and a stone wall. Outside.
March	9 Joseph Lees, .....	Russian, .....	Laborer, ....	19 S.	.....	.....		Buck Ridge washery, ..	Northumberland, ..	Fatally injured by falling into conveyor line. Outside. Died same day.
10	Lewis Overton, .....	Polish, .....	Miner, .....	28 S.	.....	.....		Hickory Ridge, ..	Northumberland, ..	Killed by fall of roof at face of breast.
12	Joseph Yanesfski, ..	Polish, .....	Miner, .....	53 M.	1	.....		Burnside, .....	Northumberland, ..	Fatally injured by fall of slate at face of breast. Died March 16.
19	John Pusher, .....	Polish, .....	Laborer, ....	17 S.	.....	.....		Luke Fidler, ....	Northumberland, ..	Instantly killed by fall of roof while timbering gangway.
April	6 John Manzelick, ....	Greek, .....	Fireman, ..	36 M.	1	3		Big Mountain, ..	Northumberland, ..	Instantly killed by boiler explosion. Outside.
June	4 John Bocknoskie, ...	Russian, .....	Miner, .....	31 M.	1	2		Big Mountain, ..	Northumberland, ..	Instantly killed by fall of slate at face of breast.
13	Frk. Musick, .....	American, .....	Miner, .....	34 M.	1	6		Cameron, .....	Northumberland, ..	Instantly killed by falling down breast manway.
July	7 Charles Helfenstein, ..	American, .....	Miner, .....	32 M.	1	4		North Franklin, ..	Northumberland, ..	Instantly killed by fall of coal forcing him into chute.
16	Thos. Kopytski, .....	Bohemian, .....	Miner, .....	26 M.	1	3		Cameron, .....	Northumberland, ..	Fatally injured by an explosion of gas. Died in State Hospital July 23.
20	Frk. Ludiditch, .....	Russian, .....	Miner, .....	24 S.	.....	.....		Hickory Ridge, ..	Northumberland, ..	Instantly killed by fall of roof slate at face of breast.
Aug.	9 Charles Rowe, .....	American, .....	Laborer, ....	21 S.	.....	.....		Burnside, .....	Northumberland, ..	Fatally injured by being caught between the frame of dam and car. Died in State Hospital August 21.
Sept.	28 Adam Pannick, .....	Polish, .....	Miner, .....	40 M.	1	3		Luke Fidler, ....	Northumberland, ..	Instantly killed by fall of roof at face of breast.
Oct.	13 Charles Lapinski, ....	Polish, .....	Miner, .....	32 S.	.....	.....		Corbin, .....	Northumberland, ..	Instantly killed by fall of coal at face of breast.
15	Edward Irick, .....	American, .....	Driver, .....	22 S.	.....	.....		Bear Valley, ....	Northumberland, ..	Instantly killed by being caught between top rail of car and chute.



TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Nov. 28	Daniel Carpeack, ....	Russian.....	Miner, .....	25	M.	1	....	Big Mountain, ..	Northumberland,	Instantly killed by fall of slate while robbing pillars.
Dec. 6	Sebastian Delfolo, ...	Austrian.....	Miner, .....	28	S.	....	....	Burnside, .....	Northumberland,	Instantly killed by fall of roof at face of breast.
6	Dominick Delfolo, ...	Austrian.....	Laborer, ...	39	S.	....	....	Burnside, .....	Northumberland,	Fatally injured by fall of roof at face of breast. Died same day.
7	John Betska, .....	Polish.....	Slatepicker,	14	S.	....	....	North Franklin,	Northumberland,	Fatally injured by falling under a car. Outside. Died same day.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	16 William Dumick, .....	Russian.....	Miner, .....	43	M.	Hickory Ridge,...	Northumberland..	Back bruised by flying pieces of coal from a blast.
	15 Mich. Mattis, .....	Russian.....	Miner, .....	50	M.	Hickory Ridge,...	Northumberland..	Right leg bruised by fall of coal at face of breast.
	17 Val. Batosic, .....	American....	Driver, .....	19	S.	Luke Fidler, ....	Northumberland..	Head and foot lacerated by fall of slate on the gangway.
	20 William Senders, .....	American....	Miner, .....	54	M.	Bear Valley, ....	Northumberland..	Head, back and leg lacerated by fall of coal at face of breast.
	25 Walter Bereubic, .....	Polish.....	Laborer, .....	23	S.	North Franklin.	Northumberland..	Arm fractured. He had his arm over side of car ascending slope and it was caught between car and platform on top of slope.
Feb.	27 John Conrad, .....	American....	Laborer, .....	60	M.	Burnside, .....	Northumberland..	Leg fractured. While unloading a car of timber a piece of timber rolled on it. Outside.
	7 Fk. Eckhorn, .....	American....	Miner, .....	30	M.	Buck Ridge, ....	Northumberland..	Hands and face burned by an explosion of gas. After firing a blast he returned to the breast with a naked light.
	13 Joseph Kroust, .....	Polish.....	Miner, .....	25	M.	Buck Ridge, ....	Northumberland..	Head and face lacerated by flying pieces of coal from a blast.
	17 George Mishannon, ..	Polish.....	Laborer, .....	40	M.	Hickory Ridge,...	Northumberland..	Head lacerated. While he was loading rock on the rock-bank a piece of rock slid over the top of the dumper and hit him on the head. Outside.
	22 John Bradley, .....	Irish.....	Miner, .....	50	M.	Colbert, .....	Northumberland..	Knee bruised. A piece of slate fell on it at face of breast.
March	24 Patrick Burke, .....	American....	Laborer, .....	35	M.	Luke Fidler, ....	Northumberland..	Internally injured. Squeezed between chute and car.
	26 Thomas Little, .....	Irish.....	Miner, .....	38	M.	Henry Clay, ....	Northumberland..	Face and hands burned by an explosion of gas.
	3 George Freeman, .....	American....	Doorboy, .....	18	S.	Cameron, .....	Northumberland..	Arm broken. He was ascending the slope and his arm was caught between the timber and the top of car.
	9 John Nolter, .....	American....	Driver, .....	19	S.	Hickory Swamp,	Northumberland..	Bruised about the body. He was spragging cars and stumbled and fell against a car.

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
March 10	William Morris, .....	Polish, .....	Miner, .....	21	S	Hickory Ridge, ..	Northumberland, ..	Neck bruised by falling down manway.
13	Val. Polack, .....	Polish, .....	Laborer, .....	22	S	Hickory Ridge, ..	Northumberland, ..	Leg fractured by fall of coal at face of breast.
17	John Martin, .....	American, .....	Fireman, .....	36	M	Burnside, .....	Northumberland, ..	Arm fractured. He was hoisting sills to ash bank with a rope attached to blast fan engine shaft, and his arm was caught between rope and shaft.
29	Ek. Pogoginski, .....	Polish, .....	Miner, .....	38	M	Buck Ridge, .....	Northumberland, ..	Face and hands burned by an explosion of gas. After firing a blast he returned to face of manway with a naked light.
20	Andrew Kolinski, .....	Polish, .....	Miner, .....	31	M	Buck Ridge, .....	Northumberland, ..	Face and hands burned by an explosion of gas, which was ignited in the gangway.
21	Joseph Stancavage, ..	Polish, .....	Miner, .....	33	M	North Franklin, ..	Northumberland, ..	Body bruised by fall of coal at face of breast.
28	Fred. James, .....	American, .....	Laborer, .....	21	S	Buck Ridge, .....	Northumberland, ..	Head lacerated. A piece of coal fell from a car ascending slope and hit him on the head.
April 6	William Hoy, .....	American, .....	Watchman, .....	62	M	Big Mountain, ..	Northumberland, ..	Slightly scalded by the explosion of a boiler. Outside.
16	Thomas Richards, ....	Welsh, .....	Pumpman, .....	21	S	Hickory Ridge, ..	Northumberland, ..	Arm fractured by being caught between plunger of pump and cross-head of engine.
May 14	Joseph Poltonovage, ...	American, ...	Car runner, .....	22	S	Luke Fidler, ....	Northumberland, ..	Foot bruised by car running over it.
15	Peter Redilla, .....	Russian, .....	Laborer, .....	29	M	Hickory Ridge, ..	Northumberland, ..	Hands and face burned by an explosion of gas. They brushed the gas down on a naked light.
15	Steve Matasock, .....	Russian, .....	Miner, .....	29	M	Cameron, .....	Northumberland, ..	Hands and face burned by gas.
17	France Maher, .....	Austrian, .....	Miner, .....	27	S	Colbert, .....	Northumberland, ..	Leg fractured by being caught between a derailed car and rib of gangway.
25	Joseph Novokuski, ....	Polish, .....	Topman, .....	22	S	Colbert, .....	Northumberland, ..	Leg bruised by fall of coal at face of breast.
29	John Moyyuncopski, ...	Polish, .....	Miner, .....	45	M	North Franklin, ..	Northumberland, ..	Face burned and left arm bruised by a premature blast.
21	Pat. Horey, .....	Irish, .....	Miner, .....	49	M	Buck Ridge, .....	Northumberland, ..	

May	21	John C. Auchmuty, ...	American...	Laborer, ...	38 M.	North Franklin, ...	Northumberland, ...	Arm fractured. While carrying a piece of pipe, it slipped and it fell on his hands and face.
June	2	John Coveluski, ...	Russian...	Miner, ...	46 S.	Cameron, ...	Northumberland, ...	Hands and face burned by an explosion of gas. He opened his safety lamp and ignited a small body of gas.
	6	John Smith, ...	American...	Miner, ...	46 S.	Cameron, ...	Northumberland, ...	Hands and face burned by gas.
	12	William Kukus, ...	American...	Miner, ...	33 M.	Euck Ridge, ...	Northumberland, ...	Leg bruised by fall of coal at face of breast.
	18	William Boduan, ...	German...	Miner, ...	23 M.	North Franklin, ...	Northumberland, ...	Left hand lacerated and burned by premature blast.
	20	William Gorgy, ...	Polish...	Laborer, ...	46 M.	North Franklin, ...	Northumberland, ...	Back bruised by being caught between mine cars. Outside.
	20	Thomas Jimbeloc, ...	Russian...	Miner, ...	41 M.	Corbin, ...	Northumberland, ...	Internally injured by piece of slate falling on him at face of breast.
July	6	Howard Miner, ...	American...	Driver, ...	15 S.	Hickory Ridge, ...	Northumberland, ...	Foot bruised by car running over it. Outside.
	11	Lew Mouse, ...	Polish...	Miner, ...	36 M.	Deer Valley, ...	Northumberland, ...	Face and hands burned through carelessness in handling powder.
	14	Joseph Chufulski, ...	Polish...	Doorboy, ...	18 S.	Colbert, ...	Northumberland, ...	Head lacerated by being kicked by a vicious mule.
	17	Henry Gessic, ...	Italian...	Miner, ...	26 M.	Cameron, ...	Northumberland, ...	Bruised about the head and body by flying pieces of coal from a blast.
	17	Val. Chelista, ...	Italian...	Miner, ...	26 M.	Cameron, ...	Northumberland, ...	Face and hands burned by an explosion of gas. After firing a blast they returned to face of breast with a naked light.
	17	Joseph Frass, ...	Italian...	Laborer, ...	25 S.	Colbert, ...	Northumberland, ...	Face and hands burned by gas.
	17	Ed. Norvage, ...	Polish...	Miner, ...	28 M.	Big Mountain, ...	Northumberland, ...	Body bruised by fall of coal at face of breast.
	19	Ed. Alveda, ...	German...	Miner, ...	40 M.	Buck Ridge, ...	Northumberland, ...	Back and leg bruised by fall of coal at face of breast.
	21	Andrew Knoeko, ...	Polish...	Miner, ...	40 M.	Stirling, ...	Northumberland, ...	Back and leg bruised by fall of coal at face of breast.
	23	John Reed, ...	American...	Miner, ...	35 M.	Buck Ridge, ...	Northumberland, ...	Hand bruised by being caught between top rock and frame of buggy.
	24	Paut Depner, ...	American...	Miner, ...	50 M.	Laure Fidler, ...	Northumberland, ...	Laceration of head and back by fall of slate at face of gangway.
	24	Simon Wisgo, ...	Polish...	Miner, ...	59 M.	North Franklin, ...	Northumberland, ...	Ribs bruised by a flying piece of coal from a blast.
	29	Wilson Kline, ...	American...	Miner, ...	37 M.	Deer Valley, ...	Northumberland, ...	Arm fractured. He was struck with an ordinary tin dipper by one of the boys in the breaker. Outside.
	31	Fk. Shatalski, ...	Polish...	Miner, ...	47 M.	North Franklin, ...	Northumberland, ...	Arm fractured. He and some of the boys were playing on their way to the colliery and he was pushed off a plank leading to the breaker. Outside.
Aug.	3	Joseph Gibbons, ...	Irish...	Slate-picker, ...	15 S.	Hickory Ridge, ...	Northumberland, ...	Face and hands burned by gas.
	4	Walter Roble, ...	Polish...	Slate-picker, ...	15 S.	Burnside, ...	Northumberland, ...	Arm fractured by being caught between a car and gangway timber.
	8	Mich. Hoodock, ...	Hungarian...	Miner, ...	33 M.	Royal Oak, ...	Northumberland, ...	Leg fractured by fall of slate at face of breast.
	10	John Haneran, ...	American...	Driver, ...	18 S.	Corbin, ...	Northumberland, ...	Body squeezed by being caught between car and high side of gangway.
	12	Joseph Shimocoski, ...	Polish...	Miner, ...	54 M.	Cameron, ...	Northumberland, ...	
	20	Charles Grobuski, ...	Polish...	Miner, ...	30 M.	Cameron, ...	Northumberland, ...	

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Aug. 22	Thomas Shaw, .....	Scotch,.....	Fireboss, .....	42	M.	North Franklin,	Northumberland,	Leg fractured. A piece of slate fell on him while he was placing a pole to secure a fall in the gangway.
22	William Holmes, .....	American,....	Miner, .....	55	S.	Cameron, .....	Northumberland,	Collar bone fractured and chest bruised. A piece of the bottom slate slid out and caught him against the top prop in the breast.
23	Ant. Wahuksi, .....	American,....	Driver, .....	18	S.	Luke Fidler, ....	Northumberland,	Collar bone fractured by being caught between a car and a prop that had been placed temporarily under a collar on the turnout.
23	Samuel Costa, .....	Italian,.....	Tunnelman, .....	26	M.	Cameron, .....	Northumberland,	{ Head lacerated and leg fractured. These men were injured by a fall of slate fifty feet from face of tunnel.
23	Mich. Luck, .....	Slavonian,....	Tunnelman, .....	25	M.			
26	John Peroski, .....	Russian,.....	Laborer, .....	22	S.	Big Mountain, ..	Northumberland,	Leg fractured by a piece of slate falling on it at face of breast.
27	John Coninski, .....	Polish,.....	Miner, .....	26	M.	Duck Ridge, .....	Northumberland,	Head and shoulders bruised by being overcome by powder smoke and falling down breast mainway.
8	Lucas Pashup, .....	Polish,.....	Miner, .....	26	S.	Cameron, .....	Northumberland,	Leg fractured by a piece of slate falling on it at face of breast.
11	Ad. Madamashuski, ..	Polish,.....	Miner, .....	47	M.	Cameron, .....	Northumberland,	Leg and hips bruised by a piece of slate falling on him at face of breast.
11	Henry Waldfogle, ....	American,....	Locomotive conductor,	16	S.	Hickory Ridge,...	Northumberland,	Legs lacerated and bruised by a car running over him. Outside.
12	Henry Fry, .....	American,....	Miner, .....	51	M.	Duck Ridge, .....	Northumberland,	Head lacerated by a piece of coal falling from rib as he was going up the mainway.
14	Felix Arashefski, .....	Polish,.....	Miner, .....	25	S.	Cameron, .....	Northumberland,	Foot bruised by a piece of slate falling on it while robbing pillars.
15	George Boblick, .....	American,....	Laborer, .....	18	S.	Luke Fidler, ....	Northumberland,	Bruised about the head by being caught between buggy and roof.
17	Crist Golden, .....	American,....	Repairman, .....	23	S.	Bear Valley, ....	Northumberland,	Hips bruised by being caught between a car and chute.



Sept.	18	Ray Beacham, .....	American,...	Miner, .....	33	M.	Burnside, .....	Northumberland, ..	Leg fractured by fall of slate while robbing pillars.
	20	Charles Louth, .....	German, .....	Miner, .....	45	S.	North Franklin, ..	Northumberland, ..	Lacerations of hands and body by handling dynamite caps carelessly.
	20	Dall. Schollenberger, ..	American,...	Oilier, .....	17	S.	North Franklin, ..	Northumberland, ..	Ankle bruised by being caught between mine cars. Outside.
Oct.	13	Joseph Bedner, .....	Polish, .....	Miner, .....	39	M.	Burnside, .....	Northumberland, ..	Arm fractured by a piece of slate falling at the face of the breast and rolling down manway, striking him on the arm.
	16	Steve. Catipeki, .....	Russian, .....	Ashman, .....	19	S.	Buck Ridge, .....	Northumberland, ..	Right leg lacerated by being caught by right wheel in fan engine house. Outside.
	20	Sol. Olesnawicz, .....	Russian, .....	Car runner, .....	28	S.	Colbert, .....	Northumberland, ..	Arm fractured. In attempting to withdraw a sprag from a car he slipped and fell on it. Outside.
	30	Lew. Musheran, .....	French, .....	Miner, .....	34	M.	Big Mountain, ...	Northumberland, ..	Hands and face burned by gas. After firing a blast he went up the chute with a naked light, contrary to orders.
	30	William Bohner, .....	American,...	Laborer, .....	28	M.	North Franklin, ..	Northumberland, ..	Great toe bruised by cog wheel falling on it. Outside.
Nov.	5	Elwood Brubaker, ....	American,...	Laborer, .....	18	S.	North Franklin, ..	Northumberland, ..	Finger bruised while uncoupling cars.
	6	Arthur Woods, .....	English, .....	Miner, .....	26	M.	Buck Ridge, .....	Northumberland, ..	Leg fractured by fall of coal which caught him against a prop in the breast.
	9	Lawrence Keating, ...	American,...	Driver, .....	19	S.	Cameron, .....	Northumberland, ..	Leg fractured. Caught between the loaded and empty cars on the bottom turnout.
	14	George Reed, .....	American,...	Driver, .....	26	M.	North Franklin, ..	Northumberland, ..	Back sprained. Caught between car and chute.
	17	Frk. Gebofski, .....	Russian, .....	Miner, .....	42	M.	Cameron, .....	Northumberland, ..	Lacerations of head and knee and back bruised by a premature blast.
	19	Fritz. Lizzas, .....	Italian, .....	Laborer, .....	25	S.	Bear Valley, ....	Northumberland, ..	Leg fractured by fall of coal at face of gangway.
	19	William Richards, ....	Welsh, .....	Miner, .....	56	M.	Bear Valley, ....	Northumberland, ..	Ankle bruised by fall of coal at face of gangway.
	26	Preston Lupold, .....	American,...	Slatepicker, ..	16	S.	Bear Valley, ....	Northumberland, ..	Leg fractured. While crossing a rope leg fell on it. Outside.
	28	Ben. Long, .....	German, .....	Laborer, .....	47	M.	Cameron, .....	Northumberland, ..	Leg fractured by a piece of timber rolling on it in the timber yard. Outside.
Dec.	28	John Luckenow, .....	German, .....	Miner, .....	25	S.	Big Mountain, ...	Northumberland, ..	Hands and face burned by gas.
	1	Pat. McAnany, .....	American,...	Miner, .....	41	M.	Bear Valley, ....	Northumberland, ..	Leg fractured by fall of coal at face of breast.
	4	Stanley Fitzgerald, ...	Polish, .....	Starter, .....	23	S.	Buck Ridge, .....	Northumberland, ..	Hands and face burned by gas.
	11	Frk. Bennock, .....	Polish, .....	Miner, .....	41	M.	Burnside, .....	Northumberland, ..	Leg fractured by fall of slate at face of breast.
	13	Joseph Shercuski, ....	Polish, .....	Miner, .....	40	M.	Luke Fidler, ....	Northumberland, ..	Leg fractured. Bumped between mine cars.
	19	Charles Slack, .....	Polish, .....	Miner, .....	26	M.	North Franklin, ..	Northumberland, ..	Right arm cut and bruised by fall of slate at face of breast.
	29	Frk. Bixler, .....	American,...	Miner, .....	45	M.	Stirling, .....	Northumberland, ..	Leg fractured by a piece of slate falling on it at face of breast.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

March 10, Hickory Ridge Colliery, Lewis Overlon, Polish, miner, was instantly killed by fall of roof at face of breast.

March 12, Burnside Colliery, Joseph Yanesefski, Polish, miner, was fatally injured by fall of slate while drilling a hole at face of breast. He died March 16.

March 19, Luke Fidler Colliery, John Pusher, Polish, laborer, was instantly killed by fall of slate while timbering the gangway. He had been warned by the miner in charge, but did not heed the warning.

June 4, Big Mountain Colliery, John Bocknoskie, Russian, miner, was instantly killed by fall of slate at face of breast. He neglected to timber his breast as he had been directed to do by the assistant foreman.

July 7, North Franklin Colliery, Charles Helfenstein, American, miner, was instantly killed by rush of coal. He was opening a heading in a pillar when a rush of coal fell on him and forced him into the chute.

July 20, Hickory Ridge Colliery, Frank Ludiditch, Russian, miner, was instantly killed by fall of roof slate at face of breast.

September 28, Luke Fidler Colliery, Adam Pannick, Polish, miner, was instantly killed by fall of roof at face of breast.

October 13, Corbin Colliery, Charles Lapinski, Polish, miner, was instantly killed by fall of coal while placing a prop.

November 26, Big Mountain Colliery, Daniel Carpeack, Russian, miner, was instantly killed by fall of slate while taking out pillars.

December 6, Burnside Colliery, Sebastian Delfolo, Austrian, miner, was instantly killed by fall of rock at face of breast. He and Dominick Delfolo were trying to bar down a piece of rock, but failed. Instead of blasting it down, they were placing a prop under it when it fell on them.

December 6, Burnside Colliery, Dominick Delfolo, Austrian, laborer, was fatally injured by fall of rock at face of breast while helping to place a prop.

## Explosions of Gas

July 16, Cameron Colliery, Thomas Kopetski, Bohemian, miner, was fatally injured by an explosion of gas. He had been warned by the fire boss of the presence of gas in the breast, and had been told that he should not go to his work until the fire boss returned, but he disregarded the orders. He brushed the gas down upon an open light, which ignited it. He died in the State Hospital, July 24.

## Cars

February 1, Burnside Colliery, Harry Stepp, American, loader, was instantly killed by being caught between timber on the high side of the gangway and a derailed car.

February 10, Cameron Colliery, Raymond Brightbill, American, car runner, was fatally injured. He was riding in the front car of

an empty trip, and while in the act of jumping out he was caught between the top of the car and the top slate of the gangway. He died same day.

February 19, Royal Oak Colliery, Charles Henning, German, laborer, was instantly killed by being caught between a derailed car and a stone wall near the breaker.

August 9, Burnside Colliery, Charles Rowe, American, laborer, was fatally injured. While driving a mule he was caught between the frame of a temporary water dam and a car. He died in the State Hospital, August 21.

October 15, Bear Valley Colliery, Edward Irick, American, driver, was instantly killed by being caught between the top rail of a car and a chute while riding on front end of car.

December 7, North Franklin Colliery, John Betska, Polish, slate picker, was fatally injured by falling under a car while crossing tracks. He died same day.

### Falling Down Shafts, Slopes, Etc.

June 13, Cameron Colliery, Frank Musick, American, miner, was instantly killed. While going up a breast he slipped and fell down the manway.

### Machinery

March 9, Buck Ridge Washery, Joseph Lees, Russian, laborer, was fatally injured by falling into a conveyor line. He died same day. Outside.

### Explosions of Boilers

April 6, Big Mountain Colliery, John Manzelick, Greek, fireman, was instantly killed by the explosion of a boiler. Outside.

## CONDITIONS OF COLLIERIES AND IMPROVEMENTS

### PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin Colliery.—One four-stage electric Turbine pump installed. One electric motor on 15-foot diameter fan at Rock slope. One electric motor on 18-foot diameter fan at Rennie drift. Condition of colliery is good.

Bear Valley Colliery.—Colliery in good condition.

Burnside Colliery.—Steam bore hole to new pump room in Third lift in shaft, 732 feet deep and  $8\frac{1}{4}$  inches in diameter. Tunnel in shaft, Second lift from East South, dip, No. 10 vein, South to South basin of No. 10 vein. Total length 109 yards. Condition of colliery is fair.

Stirling Colliery.—Tunnel from Third lift, basin tunnel, East gangway, No. 8 vein to No. 9 vein. Length 20 1-3 yards. Tunnel from underground slope, West No. 8 vein, South dip to No. 9 vein. Length 10 yards. Condition of colliery is fair, except drainage in No. 9 vein gangway.

Henry Clay Colliery.—Tunnel from West No. 10 vein, self-acting plane gangway at breast No. 3 to No.  $9\frac{1}{2}$  vein. Length 24 2-3 yards. Condition of colliery is good.

**Big Mountain Colliery.**—Self-acting plane in rock from basin tunnel to No. 10 vein. Length 40 yards. Tunnel in No. 1 slope from No. 8 vein to No. 4 vein, North dip. Length 111 1-3 yards. Tunnel in No. 1 slope from No. 9 vein to No. 4 vein, South dip. Length 138 yards. Condition of colliery is fair.

#### MINERAL RAILROAD AND MINING COMPANY

**Cameron Colliery.**—Condition of colliery is fair, except the drainage in some of the gangways.

**Luke Fidler Colliery.**—Condition of colliery is fair, except the roadbeds in No. 11 and No. 11½ gangways, in No. 2 vein.

#### SUSQUEHANNA COAL COMPANY

**Hickory Ridge Colliery.**—A tunnel was driven on No. 1 level in the No. 6 slope from No. 4 vein, South dip, to No. 5 vein, South dip, a distance of 158 feet. A tunnel was driven in the Second lift in the No. 6 slope, from No. 10½ vein, North dip, to No. 9½ vein, North dip, a distance of 358 feet. Condition of colliery is good.

**Hickory Swamp Colliery.**—Colliery is in fair condition.

#### BUCK RIDGE COAL COMPANY

**Buck Ridge Colliery No. 2.**—One new fan 14 feet in diameter has been erected during the year which can be used either as a force or an exhaust fan. Four new spiral separators have been placed in the breaker. Condition of colliery is good.

#### SHIPMAN KOAL COMPANY

**Colbert Colliery.**—Condition of colliery is fair.

#### EXCELSIOR COAL COMPANY

**Corbin Colliery.**—Condition of colliery is good.

#### LLEWELLYN MINING COMPANY

**Royal Oak Colliery.**—Condition of colliery is poor.

A bill in equity against Llewellyn Mining Company was heard on the 15th of January, 1907, before Hon. Voris Auten, Judge of Northumberland County, who granted an injunction closing the Royal Oak Colliery until necessary repairs were made to the breaker. Certain parts of the mines were also to be put in proper condition as soon as possible after resuming.

#### TREVORTON COAL LAND COMPANY

New operation not named.

Tunnels were driven as follows: In No. 1 drift, 1,300 feet to No. 2 Lykens Valley vein; in No. 2 drift, a distance of 233 feet to No. 2 Lykens Valley vein; in No. 3 drift, a distance of 528 feet to Buck Mountain vein. In No. 4 drift they have not reached the vein yet. Condition of workings is fair.



### Mine Foremen's Examinations

The annual examination for mine foremen and assistant mine foremen was held at the Court House, Pottsville, April 24 and 25.

The board was composed of the following members:

Martin McLaughlin, Inspector, Shamokin; E. A. Rhoads, Superintendent, Shamokin; James McDonald, miner, Shamokin; Theodore Schwartz, miner, Shamokin.

The following persons were recommended for certificates:

#### Assistant Mine Foremen

John Kelly, Shamokin; Charles Moran, Shamokin; John Golden, Shamokin.





# Eighteenth District

SCHUYLKILL COUNTY

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Pottsville, Pa., March 22, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Eighteenth Anthracite District for the year ending December 31, 1906.

Respectfully submitted,

JOHN CURRAN,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries,.....	25
Number of mines,.....	48
Number of mines in operation,.....	48
Number of tons of coal shipped to market.....	2,869,466
Number of tons used at mines for steam and heat,.....	391,857
Number of tons sold to local trade and used by employes,	73,163
Number of tons produced,.....	3,334,486
Number of persons employed inside of mines,.....	6,145
Number of persons employed outside,.....	3,428
Number of fatal accidents inside of mines,.....	21
Number of fatal accidents outside,.....	7
Number of non-fatal accidents inside of mines,.....	65
Number of non-fatal accidents outside.....	14
Number of tons of coal produced per fatal accident inside,	158,785
Number of persons employed per fatal accident inside,..	293
Number of persons employed per fatal accident outside,..	490
Number of persons employed per non-fatal accident in- side, .....	95
Number of persons employed per non-fatal accident out- side, .....	245
Number of wives made widows,.....	10
Number of children orphaned,.....	26
Number of steam locomotives used inside of mines,.....	7
Number of steam locomotives used outside,.....	30
Number of compressed air locomotives used inside,.....	5
Number of fans in use,.....	27
Number of gaseous mines in operation.....	28
Number of non-gaseous mines in operation,.....	20
Number of old mines abandoned,.....	2
Number of old mines reopened,.....	3

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Coal and Navigation Company,.....	1,134,572
Lehigh and Wilkes-Barre Coal Company,.....	618,906
Philadelphia and Reading Coal and Iron Company,.....	450,737
Mill Creek Coal Company,.....	434,672
Coxe Brothers and Company, Incorporated,.....	257,763
Dodson Coal Company,.....	141,098
Beddall Brothers,.....	75,343
Truman M. Dodson Coal Company,.....	72,409
East Lehigh Coal Company,.....	26,966
Phillips Brothers,.....	26,409
Maryd Coal Company,.....	24,646
Campion and Gorman,.....	21,530
William Cook,.....	11,406
Silver Brook Coal Company,.....	7,062
Joseph H. Denning, .....	6,441
Moss Glenn Coal Company,.....	3,547
Neil Breslin and Son,.....	618
William H. Greenfield, Jr.,.....	20,361
Total, .....	3,334,486

## Production by Counties

Schuylkill, .....	3,334,486
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Coal and Navigation Co.,	5	4	9	11	2	13	228,914	103,143	1,912	756	2,698	388	189	378	245
Lehigh and Wilkes-Barre Coal Co.,	2	1	3	5	6	11	240,753	123,781	1,143	521	1,664	571	521	87	
Philadelphia and Reading Coal and Iron Co.,	4	1	5	10	2	12	112,484	45,074	1,026	618	1,644	257	618	103	
Mill Creek Coal Co.,	7		7	18		18	62,096	24,146	615	412	1,427	88		34	
Coxe Brothers and Co., Inc.,				2	1	3	128,881	47,033	316	243	559		158	243	
Dodson Coal Co.,	1		1	3	1	4	441,498	7,241	297	111	318	285		95	206
Truman M. Dodson Coal Co.,		1	1	10	1	11							21	111	
East Lehigh Coal Co.,				4		5		26,966	43	47	90		43		
Maryd Coal Co.,	1		1	1	1	2	24,646	6,162	245	161	406	245	61	161	
Campion and Gorman,				1		1	21,530		38	30	68	38			
Joseph H. Denning,				1		1		6,441	15	17	32		15		
Miscellaneous companies,									270	306	576				
Totals and averages for district,	21	7	28	65	14	79	158,785	51,299	6,145	2,428	9,573	293	490	95	



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal, .....	1												1	4.76
Falls of slate, .....		1											1	4.76
Falls of roof, .....									1				1	4.76
Mine cars, .....			1					1			1		3	14.29
Explosions of gas and dust, .....		1	1					2		1			5	23.81
Suffocation by gas, etc., .....			1								1		1	4.76
Explosions of powder and dynamite, .....								1	1				2	9.53
Premature blasts, .....			1										1	4.76
Falling into slopes, etc., .....		1											1	4.76
By mules, .....		1	1				1			1			4	19.05
Miscellaneous, .....		1	1				1			1			4	19.05
Totals, .....	1	4	4				2	4	2	2	2		21	100.00
Causes of Accidents Outside														
Cars, .....									1				1	14.29
Machinery, .....								1		1			1	14.28
Suffocation in chutes, etc., .....													1	14.29
Miscellaneous, .....	1						2				1		4	57.14
Totals, .....	1						2	1	1	1	1		7	100.00
Grand totals inside and outside, .....	2	4	4				4	5	3	3	3		28	.....

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents														
Falls of coal, .....	1		1			1		1	1	1	2	1	9	13.85
Falls of slate, .....			1		2	1							6	9.23
Falls of roof, .....	1									2		1	4	6.10
Mine cars, .....			4		1	1	1	2			1	1	13	20.60
Explosions of gas and dust, .....	3							4		1		1	13	20.00
Premature blasts, .....							4						4	10.77
Falling into slopes, etc., .....	1	1					4	1				1	8	12.31
By mules, .....			1								1		1	1.54
Miscellaneous, .....	1		1			1					1		4	6.15
Totals, .....	9	1	12		3	4	9	8	1	7	6	5	65	100.00
Causes of Accidents Outside														
Cars, .....		1	1									1	3	21.43
Machinery, .....			1								1		2	14.28
Miscellaneous, .....	2	1	1	1		2					2		9	64.29
Totals, .....	2	2	3	1		2					3	1	14	100.00
Grand totals inside and outside, .....	11	3	15	1	3	6	9	8	1	7	9	6	79	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	1	2	2	.....	.....	.....	1	2	1	2	1	.....	11
Miners' laborers, .....	.....	1	1	.....	.....	.....	1	1	1	.....	.....	.....	5
Drivers and runners, .....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	1	.....	2
All other employes, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	3
Totals, .....	1	4	4	.....	.....	.....	2	4	2	2	2	.....	21
Outside													
Blacksmiths and carpenters, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Engineers and firemen, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Slatepickers (boys), .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
All other employes, .....	.....	.....	.....	.....	.....	.....	2	.....	1	1	.....	.....	4
Totals, .....	1	.....	.....	.....	.....	.....	2	1	1	1	1	.....	7
Grand totals inside and outside, .....	2	4	4	.....	.....	.....	4	5	3	3	3	.....	28

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant mine foremen, .....						1		1					1
Fire bosses and assistants, .....													1
Miners, .....	6	1	7		12	2	3	3	1	6	1	3	38
Miners' laborers, .....			1				1	5		1	1	1	8
Drivers and runners, .....	1		2		1	1					3	1	9
Company men, .....	2		2					1			1		6
All other employes, .....							12						12
Totals, .....	9	1	12		3	4	9	8	1	7	6	5	65
Outside													
Engineers and firemen, .....	1			1									2
Slatepickers (boys), .....			1								1		2
Slatepickers (men), .....						1							1
All other employes, .....	1	2	2			1					2	1	9
Totals, .....	2	2	3	1		2					3	1	14
Grand totals inside and outside, ....	11	3	15	1	3	6	9	8	1	7	9	6	79

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	1	...	2	...	...	...	2	2	2	...	1	...	10
German, .....	1	2	1	...	...	...	...	2	...	2	1	...	9
Polish, .....	...	1	...	...	...	...	1	...	...	1	1	...	3
Hungarian, .....	...	1	...	...	...	...	...	...	...	...	...	...	1
Slavonian, .....	...	1	...	...	...	...	1	1	...	1	...	...	4
Lithuanian, .....	...	...	1	...	...	...	...	...	...	...	...	...	1
Tyrolean, .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals, .....	2	4	4	...	...	...	4	5	3	3	3	...	28

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
American, .....	3	1	4	1	1	...	...	2	...	...	3	...	15
English, .....	1	...	...	...	...	1	...	...	...	1	...	...	3
Welsh, .....	1	...	1	...	...	...	...	1	...	...	...	...	3
Irish, .....	1	...	...	...	...	...	...	...	...	...	...	...	2
German, .....	1	1	3	...	...	4	2	2	...	1	2	1	20
Polish, .....	1	...	...	...	...	...	...	...	...	1	...	...	3
Hungarian, .....	...	...	1	...	...	1	...	1	...	1	1	1	5
Italian, .....	2	...	4	...	...	...	2	1	1	...	3	1	14
Slavonian, .....	...	1	...	...	...	...	...	...	...	...	3	...	5
Lithuanian, .....	1	...	1	...	...	...	...	...	...	1	...	...	4
Austrian, .....	1	...	...	...	...	...	...	...	...	...	...	...	1
Russian, .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals, .....	11	3	15	1	3	6	9	8	1	7	9	6	79



## Mill Creek Coal Co.

Buck Mountain No. 1, .....	Gaseous, .....	Slope, .....	Fan, .....	18	4	4	80	.1	Guibal, .....	8	88,008	47,124	90,117	224	210
Buck Mountain No. 2, .....	Gaseous, .....	Slope, .....	Fan, .....	18	4	4	80	.5	Guibal, .....	8	88,008	47,124	90,117	224	210
Buck Mountain No. 3, .....	Gaseous, .....	Slope, .....	Fan, .....	23	8	6.3	65	.2	Guibal, .....	8	90,000	45,000	100,000	184	244
Middle Lehigh No. 1, .....	Gaseous, .....	Slope, .....	Fan, .....	16	4.2	3.8	50	.3	Guibal, .....	8	90,000	45,000	100,000	184	244
Middle Lehigh No. 2, .....	Non-gas, .....	Slope, .....	Natural, .....	3						3				108	
Middle Lehigh No. 3, .....	Non-gas, .....	Slope, .....	Natural, .....												

## Coxe Brothers and Co., Inc.

Onesida No. 1, .....	Gaseous, .....	Slope, .....	Fan, .....	12.6	5.3	5.10	149	1.75	Pelzer, .....	10	65,310	36,000	66,530	122	295
Onesida No. 2, .....	Gaseous, .....	Shaft, .....													
Onesida No. 3, .....	Non-gas, .....	Slope, .....	Fan, .....	20	6	5.9	30	.5	Guibal, .....	1	12,000	4,000	13,500	5	90
Onesida No. 4, .....	Non-gas, .....	Slope, .....	Fan, .....	20	6	6.6	68	.9	Guibal, .....	8	70,007	54,001	74,600	141	383
Onesida No. 5, .....	Non-gas, .....	Slope, .....													
Onesida No. 6, .....	Non-gas, .....	Slope, .....													
Onesida No. 7, .....	Non-gas, .....	Shaft, .....													

## Dodson Coal Co.

Morea, .....	Gaseous, .....	Shaft, .....	Fan, .....	18	6.10	6	80	1	Guibal, .....	6	85,000	88,000	90,000	200	440
Greenwood, .....	Gaseous, .....	Slope, .....	Fan, .....	18	6.10	6	70	.8	Guibal, .....	6	85,000	88,000	90,000	200	440
Beddall Brothers	Non-gas, .....	Drift, .....	Natural, .....				75	.5	Guibal, .....	2				14	

## Truman M. Dodson Coal Co.

Kaska William No. 1, .....	Gaseous, .....	Shaft, .....	Fan, .....	22	6	5.10	60	1	Guibal, .....	9	53,800	31,000	56,000	121	250
Kaska William No. 2, .....	Gaseous, .....	Shaft, .....	Fan, .....	16	4	5	60	.5	Guibal, .....	9	53,800	31,000	56,000	121	250

## East Lehigh Coal Co.

East Lehigh, .....	Gaseous, .....	Drift, .....	Fan, .....	12	4	3.6	70	.5	Guibal, .....	3	24,650	14,800	23,500	37	400
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## Phillips Brothers

Silver Hill, .....	Non-gas, .....	Drift, .....	Natural, .....											35	
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## Maryd Coal Co.

Maryd No. 1, .....	Gaseous, .....	Shaft, .....	Fan, .....	16	4	5	80	1.7	Guibal, .....	3	50,000	30,800	52,153	58	357
Maryd No. 2, .....	Gaseous, .....	Slope, .....	Fan, .....	18	5	6	40	1.5	Guibal, .....	2	45,000	11,700	46,000	58	325
Maryd No. 3, .....	Gaseous, .....	Slope, .....	Fan, .....	8	1.6	3	60	1	Guibal, .....	1	31,400	9,200	32,500	23	400
Maryd, .....	Non-gas, .....	Drift, .....													

## Campion and Gorman

Bell, .....	Non-gas, .....	Drift, .....												38	
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## William Cook

Oakley, .....	Non-gas, .....	Slope, .....	Natural, .....											12	
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## Silver Brook Coal Co.

Silver Brook, .....	Gaseous, .....	Slope, .....	Fan, .....	18	5	8									
Silver Brook, .....	Gaseous, .....	Slope, .....	Fan, .....	14	4	7									

\*Abandoned February 5.



TABLE I.—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Joseph H. Denning Sebastopol No. 1, .....	Slope, .....	Non-gas. Non-gas.	Natural, Natural.	}	}	}	}	}	}	}	}	}	}	}	}	}
Sebastopol No. 2, .....	Slope, .....	Non-gas. Non-gas.	Natural, Natural.													
Moss Glenn Coal Co. Moss Glenn, .....	Slope, .....	Non-gas.	Natural,													
Neil Breslin and Son Coal Hill, † .....	Drift, .....	Non-gas.	Natural,													

† Abandoned April 1

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Coal and Navigation Co. No. 8 colliery, .....	Schuylkill, .....	Baird Snyder, Jr., .....	Lansford, .....	W. J. Whilden, .....	Lansford, .....	C. R. R. of N. J.
No. 10 colliery, .....						
No. 11 colliery, .....						
No. 12 colliery, .....						
No. 14 colliery, .....						
No. 15 washery, .....						
Lehigh and Wilkes-Barre Coal Co. Audenried No. 4, .....	Schuylkill, .....	C. F. Huber, .....	Wilkes-Barre, .....	E. J. Newbaker, .....	Audenried, .....	C. R. R. of N. J.
Honey Brook No. 5, .....						
Philadelphia and Reading Coal and Iron Co. Silver Creek, .....	Schuylkill, .....	W. J. Richards, .....	Pottsville, .....	Reese Tasker, .....	Pottsville, .....	P. and R.
Eagle Hill, .....						
Eagle Hill No. 2, .....	Schuylkill, .....	T. D. Jones, General Manager, .....	New Boston, .....	J. Elmer Jones, .....	New Boston, .....	Lehigh Valley and Penna.
Mill Creek Coal Co. Buck Mountain, .....						
Vulcan, .....						
Middle Lehigh, .....						
Coxe Brothers and Co., Inc. Onelda, .....						
Morea, .....	Schuylkill, .....	E. L. Bullock, .....	Audenried, .....	Truman M. Dodson, .....	Morea, .....	Penna. and Lehigh Valley
Beddall Brothers Greenwood, .....	Schuylkill, .....	M. A. Gerber, .....	Tamaqua, .....	M. A. Gerber, .....	Tamaqua, .....	C. R. R. of N. J.
Truman M. Dodson Coal Co. Kaska William, .....	Schuylkill, .....	E. L. Bullock, .....	Audenried, .....	Thomas J. Williams, .....	Kaska, .....	P. and R.
East Lehigh Coal Co. East Lehigh, .....	Schuylkill, .....	James Tinley, .....	Tamaqua, .....	James Tinley, .....	Tamaqua, .....	P. and R. and C. R. R. of N. J.
Phillips Brothers Silver Hill, .....	Schuylkill, .....	T. C. Reese, .....	Middleport, .....	T. C. Reese, .....	Middleport, .....	P. and R.

TABLE 1.—Continued

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Maryd Coal Co.	Schuykill.....	J. Leisenring Wentz.	1727 Land Title Bldg., Phila.	George W. Wilmot,	Maryd, .....	P. and R. and C. R. R. of N. J.
Campion and Gorman	Schuykill.....	D. J. Slattery, ....	Tuscarora, .....	D. J. Slattery, ....	Tuscarora, .....	P. and R.
William Cook	Schuykill.....	William Cook, ....	Tuscarora, .....	William Cook, ....	Tuscarora, .....	P. and R.
Silver Brook Coal Co.	Schuykill.....	J. Leisenring Wentz.	1727 Land Title Bldg., Phila.	.....	.....	P. and R.
Joseph H. Denning	Schuykill.....	Joseph H. Denning,	St. Clair, .....	Joseph H. Denning,	St. Clair, .....	P. and R.
Sebastopol, .....	Schuykill.....	Martin J. Delaney,	Silver Creek, .....	T. J. Simon, .....	Pottsville, .....	P. and R.
Moss Glenn Coal Co.	Schuykill.....	Nell Breslin, .....	Middleport, .....	Nell Breslin, .....	Middleport, .....	P. and R.
Coal Hill, .....	Schuykill.....	Frederick H. John,	Middleport, .....	.....	.....	P. and R.
William H. Greenfield, Jr.	Schuykill.....	.....	.....	.....	.....	P. and R.
Pine Dale washery, .....	Schuykill.....	.....	.....	.....	.....	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries		County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules	
Lehigh Coal and Navigation Co.			{ Schuylkill....}	266,924	21,972	8,086	296,982	264	691	2	4	55	88,500	119
No. 8 colliery.....		345,512		33,400	8,268	397,200	252	843	3	8	330	96,750	57	
No. 10 colliery.....		264,648		23,273	8,222	296,153	251	705	2	1	315	84,250	72	
No. 11 colliery.....		83,500		13,252	3,833	100,675	248	300	1			71,250	38	
No. 12 colliery.....								126	1				42,275	12
No. 14 colliery,†														
No. 15 washery.....			960,674	101,897	28,439	1,091,010	.....	2,635	9	13	720	383,025	338	
Totals.....			36,938	6,064	590	43,562	293	63						
Lehigh and Wilkes-Barre Coal Co.			{ Schuylkill....}	997,612	107,961	28,999	1,134,572	.....	2,698	9	13	720	383,025	338
Audenried No. 4.....		337,039		28,380	2,985	368,404	220	820	2	7	5,963	90,685	83	
Honey Brook No. 3.....		227,908		22,594		250,502	211	764	1	4	2,111	111,599	51	
Totals.....			564,947	50,974	2,985	618,906	.....	1,664	3	11	8,074	206,294	134	
Philadelphia and Reading Coal and Iron Co.			{ Schuylkill....}	234,996	32,618	3,484	271,288	243	1,007	4	10	3,570	18,079	86
Silver Creek.....		145,577		31,683	2,179	179,439	241	602	1	2	1,350	37,639	62	
Eagle Hill.....								35				2	23,297	
Eagle Hill No. 2.....														
Totals.....			380,573	64,301	5,663	450,737	.....	1,644	5	12	4,922	78,925	148	

\*Miscellaneous

†Not shipping coal.

TABLE 2.—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Mill Creek Coal Co.												
Buck Mountain, .....	{ Schuylkill, ... }	293,502	24,866	.....	228,368	211	339	2	8	5,519	8,925	34
Vulcan, .....		163,547	13,588	.....	183,115	202	402	4	9	5,337	9,580	36
Middle Lehigh, .....		13,124	8,043	.....	23,169	46	226	1	1	233	4,900	17
Totals, .....		382,173	52,419	.....	434,672	.....	1,027	7	18	11,744	22,406	87
Oneida, .....		207,233	47,892	2,648	257,763	*218	559	.....	3	3,949	29,415	80
Morea, .....	Dodson Coal Co.	121,362	18,900	836	141,098	213	491	1	4	2,225	21,425	96
Greenwood, .....	Beddall Brothers	53,154	2,864	13,325	75,343	269	190	.....	.....	91	12,900	19
Kaska William, .....	Truman M. Dodson Coal Co.	42,353	29,675	401	72,409	119	318	1	11	1,525	19,800	34
East Lehigh, .....	East Lehigh Coal Co.	16,831	1,000	9,135	26,966	218	90	.....	1	143	4,250	11
Silver Hill, .....	Phillips Brothers	25,659	1,100	250	26,409	195	45	.....	.....	120	3,600	7
Maryd, .....	Maryd Coal Co.	12,425	11,515	706	24,616	42	406	1	5	619	18,480	32

\*Ten hours constituting one day.



Bell, .....	Campion and Gorman	Schuykill.....	29,336	1,200	4	21,539	181	68	1	.....	200	4,325	11
Oakley, .....	William Cook	Schuykill.....	9,819	706	881	11,406	236	29	.....	.....	245	2,500	5
Silver Brook, .....	Silver Brook Coal Co.	Schuykill.....	5,096	166	1,800	7,062	18	24	.....	.....	130	.....	22
Sebastopol, .....	Joseph H. Denning	Schuykill.....	1,133	600	4,708	6,441	275	32	.....	1	3	1,850	10
Moss Glenn, .....	Moss Glenn Coal Co.	Schuykill.....	2,778	261	508	3,547	199	30	.....	.....	120	1,200	1
Coal Hill,† .....	Neil Breslin and Son	Schuykill.....	462	42	114	618	73	8	.....	.....	15	25	4
Pine Dale washery, .....	William H. Greenfield, Jr.	Schuykill.....	29,160	201	.....	20,361	291	20	.....	.....	.....	.....	1
Grand totals, .....			2,869,466	391,857	73,163	3,334,486	.....	9,573	28	79	35,146	810,619	1,091

\*Abandoned February 5.

†Abandoned April 1.

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Lehigh Coal and Navigation Co., .....	Schuylkill, ...	987,612	107,961	28,999	1,134,572	2,698	9	13	720	383,025	328
Lehigh and Wilkes-Barre Coal Co., .....		364,947	50,574	2,885	618,906	1,664	3	11	8,073	205,294	134
Philadelphia and Reading Coal and Iron Co., .....		389,173	59,499	5,863	460,757	1,614	5	12	4,922	78,959	148
Mid-Creek Coal Co., .....		382,176	47,892	.....	357,662	1,226	7	13	1,914	53,406	87
Coxs, Brothers and Co., .....		297,223	47,892	2,648	357,662	497	.....	3	3,914	53,406	60
Dodson Coal Co., .....		121,362	18,900	836	141,093	497	1	4	2,295	21,425	19
Beddall Brothers, .....		59,154	8,864	13,325	75,343	190	.....	1	2,295	21,425	19
Dodson Coal Co., .....		42,333	29,675	401	72,409	318	.....	11	1,825	19,800	34
Truman M. Dodson Coal Co., .....		114,089	16,791	18,105	148,895	983	2	7	1,535	35,830	105
Miscellaneous companies, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....		2,869,466	391,857	73,163	3,334,486	9,573	28	79	35,145	810,019	1,001

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Total horse power	Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Lehigh Coal and Navigation Co., .....	Schuylkill	32	550	41	13,028	13,578	10	.....	.....	113	4,759	5	7,229	4,350	.....	2
Lehigh and Wilkes-Barre Coal Co., .....		33	1,350	43	4,660	6,010	8	.....	.....	34	4,820	11	16,811	7,015	.....	.....
Philadelphia and Reading Coal and Iron Co., .....		20	600	21	3,000	3,600	.....	.....	.....	33	4,934	7	3,267	2,257	.....	1
Mill Creek Coal Co., .....		25	2,960	25	4,050	7,010	6	3	.....	43	4,475	13	15,400	3,500	.....	2
Coxe Brothers and Co., Inc., .....		21	880	25	3,200	4,080	4	2	.....	24	3,455	9	8,600	4,662	1	1
Dodson Coal Co., .....		17	.....	17	2,135	2,135	1	.....	.....	18	1,200	5	7,538	7,538	.....	.....
Beddall Brothers, .....		.....	.....	.....	2,430	420	3	.....	.....	10	157	.....	.....	.....	.....	.....
Truman M. Dodson Coal Co., .....		16	2,240	16	2,240	2,240	.....	.....	.....	13	2,425	2	2,350	1,500	.....	1
East Lehigh Coal Co., .....		3	350	3	350	350	.....	.....	.....	12	180	.....	.....	.....	.....	.....
Phillips Brothers, .....		3	120	3	120	120	1	.....	.....	1	60	.....	.....	.....	.....	.....
Maryd Coal Co., .....		9	1,350	9	1,350	1,350	2	.....	.....	12	800	4	1,590	1,590	.....	1
Carleton Coal and Gorman, .....		2	175	2	175	175	.....	.....	.....	1	50	.....	.....	.....	.....	.....
William Creek Coal Co., .....		2	120	2	120	120	1	.....	.....	3	176	.....	.....	.....	.....	.....
Silver Brook Coal Co., .....		12	1,800	12	1,800	1,800	1	.....	.....	10	600	4	3,250	2,000	.....	.....
Joseph H. Denning, .....		1	18	1	15	33	.....	.....	.....	3	50	.....	.....	.....	.....	.....
Moss Glenn Coal Co., .....		.....	100	.....	100	100	.....	.....	.....	2	60	.....	300	75	.....	.....
Neil Breslin and Son, .....		.....	20	.....	20	20	.....	.....	.....	1	12	.....	.....	.....	.....	.....
William H. Greenfield, Jr., .....		2	80	2	80	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....		163	6,253	232	36,853	43,211	37	5	.....	343	28,193	62	66,236	34,407	1	8

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators and Col- lieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh Coal and Navigation Co.		2	2	7	125	29	30	12	.....	112	121	438	.....	1	3	12	13	22	1	109	163	601
No. 8 colliery, .....		1	1	7	155	25	46	22	2	59	267	585	.....	1	9	26	30	57	1	134	258	842
No. 10 colliery, .....		1	1	7	112	27	39	4	2	136	157	533	.....	1	9	12	12	30	1	107	172	795
No. 11 colliery, .....		1	1	7	57	29	12	1	4	34	119	200	.....	1	4	11	32	14	1	37	160	880
No. 12 colliery, .....	Schuylkill	1	1	7	6	49	19	3	2	6	49	126	.....	1	4	11	32	14	1	37	160	880
No. 14 colliery, .....		1	1	7	6	49	19	3	2	6	49	126	.....	1	4	11	32	14	1	37	160	880
No. 15 washery, .....		7	3	19	455	159	128	42	10	406	713	1,942	.....	4	27	61	87	123	4	387	693	2,635
Totals, .....		7	3	19	475	159	128	42	10	406	713	1,942	.....	1	28	65	89	138	4	437	756	2,698
Lehigh and Wilkes-Barre Coal Co.		2	2	3	202	180	28	17	4	119	58	593	.....	1	3	31	73	10	2	110	227	820
Audenried No. 4, .....		1	2	1	146	109	19	11	1	108	152	559	.....	1	3	24	75	6	2	101	214	764
Honey Brook No. 5, .....	Schuylkill	1	2	1	146	109	19	11	1	108	152	559	{ 3	4	36	54	75	6	2	42	*80	80
Totals, .....		3	2	4	348	289	47	28	5	227	210	1,143	5	6	35	56	148	16	4	253	521	1,664

\*Miscellaneous.

Philadelphia and Reading Coal and Iron Co.	1	5	256	119	37	3	2	101	161	640	2	11	20	75	25	5	215	367	1,007
Silver Creek	1	6	194	90	17	2	4	74	68	365	2	10	23	29	39	2	121	236	692
Eagle Hill	1	1	14	14	1	1	1	2	4	20	1	1	5	1	1	1	9	15	35
Eagle Hill No. 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Totals	2	1	15	223	54	5	6	177	233	1,025	5	21	57	118	65	7	345	618	1,644
Mill Creek Coal Co.																			
Buck Mountain	1	1	4	108	66	22	1	21	16	242	1	8	27	14	63	3	41	157	339
Vulcan	1	1	4	154	53	20	10	2	19	271	1	1	7	25	9	52	2	34	462
Middle Lehigh	1	1	1	46	35	8	2	5	.....	102	1	1	6	25	17	2	46	124	256
Totals	3	2	9	308	154	50	13	8	45	23	1	3	21	77	40	142	7	121	1,027
Coxe Brothers and Co., Inc.																			
Onelda	3	2	1	192	16	38	5	8	11	40	310	1	17	47	19	24	5	130	243
Dodson Coal Co.																			
Morse	1	1	3	103	47	34	7	3	30	7	235	1	1	11	23	25	8	2	135
Stripping	1	1	2	48	1	1	1	1	1	1	50	1	1	1	1	1	1	1	1
Totals	1	3	105	95	34	7	3	30	7	285	1	1	11	23	25	8	2	135	296
Beddall Brothers																			
Greenwood	1	1	31	15	12	2	2	23	.....	85	1	1	4	6	23	2	1	67	190
Truman M. Dodson Coal Co.																			
Kaska William	1	4	77	16	25	3	8	53	20	207	1	1	8	26	13	26	2	34	111
East Lehigh Coal Co.																			
East Lehigh	1	1	14	14	4	1	1	8	.....	43	1	1	2	2	8	1	1	31	47
Phillips Brothers																			
Silver Hill	1	1	10	4	2	.....	.....	4	2	23	1	1	2	2	5	1	1	9	22
Maryd Coal Co.																			
Maryd	1	2	116	35	7	1	3	61	19	245	1	1	14	22	19	7	5	92	161
Campion and Gorman																			
Bell	1	1	22	3	5	2	.....	5	.....	38	1	1	2	3	12	.....	1	10	30
William Cook																			
Oakley	1	1	8	1	2	.....	.....	.....	3	16	1	1	1	2	5	.....	4	13	29
Silver Brook Coal Co.																			
Silver Brook	1	1	40	20	14	3	11	.....	35	125	1	1	8	29	35	32	1	22	129
Joseph H. Denning																			
Sebastopol	1	1	5	7	.....	.....	.....	2	.....	15	1	1	1	3	4	.....	9	17	32
Moss Glenn Coal Co.																			
Moss Glenn	1	1	12	2	.....	.....	1	2	.....	18	1	1	1	2	2	3	1	3	12



TABLE 3.—Continued

Names of Operators and Col- lieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Nell Breslin and Son Coal Hill, .....	Schuykill, .....	.....	.....	.....	1	1	1	.....	.....	.....	.....	3	1	.....	.....	1	2	.....	.....	1	5	8
William H. Greenfield, Jr. Pine Dale washery, .....	Schuykill, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	3	.....	.....	13	20	20
Grand totals, .....	.....	29	11	60	2,054	1,034	423	112	63	1,054	1,305	6,145	14	32	174	425	570	455	42	1,716	3,428	9,573

TABLE 3.—Recapitulation

Lehigh Coal and Navigation Co., .....	7	3	19	455	159	128	42	10	406	713	1,942	.....	5	28	65	89	128	4	437	756	2,898	
Lehigh and Wilkes-Barre Coal Co., .....	3	2	4	348	269	47	28	5	227	210	1,143	3	6	35	56	148	16	4	253	521	1,664	
Philadelphia and Reading Coal and Iron Co., .....	2	1	15	310	223	54	5	6	177	233	1,025	.....	5	21	57	118	65	7	245	618	1,644	
Mill Creek Coal Co., .....	3	2	9	308	154	50	13	8	45	23	615	1	3	21	77	40	142	7	121	412	1,027	
Coxe Brothers and Co., Inc., .....	3	2	1	192	16	38	5	8	11	40	316	.....	1	17	47	19	24	5	130	243	1,569	
Dodson Coal Co., .....	3	3	3	105	95	34	7	3	30	7	285	1	1	11	23	25	8	2	135	206	491	
Dedaff Brothers, .....	1	1	1	31	15	12	2	.....	.....	.....	85	1	1	1	4	6	23	2	1	67	105	190
Truman M. Dodson Coal Co., .....	1	1	1	77	16	25	3	8	53	20	207	1	1	8	26	13	26	2	34	111	318	
Miscellaneous companies, ..	8	1	4	228	87	35	7	15	82	59	526	7	9	29	68	95	44	10	194	456	982	
Totals, .....	29	11	60	2,054	1,034	423	112	63	1,054	1,305	6,145	14	32	174	425	570	455	42	1,716	3,428	9,573	

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Lehigh Coal and Navigation Co. No. 8 colliery, .....	Schuylkill,.....	25	22	36	.....	18	25	23	26	24	26	24	24	264
No. 10 colliery, .....		24	18	23	.....	17	25	24	25	22	25	25	24	252
No. 12 colliery, .....		26	17	22	.....	18	19	25	26	23	24	26	21	251
No. 14 colliery, * .....		24	22	21	.....	13	20	21	27	24	26	25	25	248
Lehigh and Wilkes-Barre Coal Co. Audentred No. 4, .....	Schuylkill,.....	23	20	24	.....	12	23	17	19	18	21	23	20	220
Honey Brook No. 5, .....		23	19	23	.....	12	22	18	19	17	19	21	18	211
Philadelphia and Reading Coal and Iron Co. Silver Creek, .....	Schuylkill,.....	25	21	23	.....	11	23	17	23	28	24	21	22	243
Eagle Hill, .....		24	22	25	.....	16	23	20	25	18	26	24	23	241
Eagle Hill No. 2,* .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mill Creek Coal Co. Buck Mountain, .....		23	19	22	.....	11	18	18	20	19	23	19	19	211
Vulcan, .....	Schuylkill,.....	22	19	22	.....	9	14	22	17	17	21	19	20	202
Middle Lehigh, .....		.....	.....	.....	.....	.....	.....	.....	.....	7	14	9	16	46
Coxe Brothers and Co., Inc. Oneida, .....	Schuylkill,.....	17	17	22	.....	11	23	23	24	20	22	19	20	218
Dodson Coal Co. Morea, .....		20	20	21	.....	9	22	19	19	19	23	20	21	213
Beddall Brothers Greenwood, .....	Schuylkill,.....	26	21	26	.....	18	26	25	27	23	27	25	25	269
Truman M. Dodson Coal Co. Kaska William, .....		19	15	18	.....	.....	.....	15	.....	5	16	16	15	119

\*No time returned; not shipping coal.



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	Alvin Lithgow, .....	American,...	Locomotive fireman.	21	S.	...	...	No. 10 L. C. & N. Co.	Schuylkill,.....	Killed. It is supposed that he was stopping on the front of the locomotive that pulls the cars from the breaker to the top of the inside slope and missing his footing he fell under it. Outside, Fatally injured. He was working at the East 7 foot gangway. A piece of coal fell on him and he died same day.
22	John Wasnel, .....	Polish,.....	Miner, .....	30	M.	1	1	Eagle Hill, ....	Schuylkill,.....	Killed. He was standing on the truck, on the pitch at top of slope, waiting to take a piece of timber from his fellow workman. He fell over the back of the truck and rolled to the bottom of the slope, a distance of 150 feet on an angle of sixty-two degrees.
Feb. 2	Paul Vosick, .....	Slavonian,...	Laborer, .....	40	M.	1	4	Maryd, .....	Schuylkill,.....	Fatally injured. He was taking out pillars in East Buck Mountain vein. He went up into his place of work in the morning with a naked lamp and ignited the gas.
3	John Machunes, .....	Polish,.....	Miner, .....	48	M.	1	2	Vulcan, .....	Schuylkill,.....	Killed. He was crossing the bottom of the shaft from one side to the other, and was caught by the descending cage.
21	Alex. Socofskie, .....	Polish,.....	Laborer, .....	22	S.	...	...	Silver Creek, ....	Schuylkill,.....	Fatally injured. A piece of slate fell on him at face of breast. He was taken to the Miners' Hospital and died from his injuries in June.
24	Joseph Duscavage, ....	Lithuanian,...	Miner, .....	22	S.	...	...	Buck Mountain, ..	Schuylkill,.....	Fatally injured. He was caught between mine car and timber on high side of gangway.
March 5	Theodore Powalkis, ...	Polish,.....	Driver, .....	22	M.	1	...	Silver Creek, ....	Schuylkill,.....	Fatally injured. He started to drill a hole that was left from a blast of the day before. When he rammed the drill in the hole the powder exploded that had failed to explode in the previous blast.
8	Raymond Pencarle, ....	Tyrolean, ....	Miner, .....	29	M.	1	...	No. 8 L. C. & N. Co.	Schuylkill,.....	

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
March 8	William Morgan, .. ....	American,...	Switch tender	17	S.	....	....	No. 11 L. C. & N. Co.	Schuylkill,....	Fatally injured. He was riding on the back end of an empty car of a trip hauled by a locomotive. The car jumped the track, knocked out a set of timber. The collar of the set fell on him and he died from his injuries next day.
21	Andrew Duncan, .....	American,...	Miner, .....	25	M.	1	1	No. 10 L. C. & N. Co.	Schuylkill,....	Fatally injured. His fellow workman opened his safety lamp at the face of breast and ignited the gas. Duncan was repairing his manway on the down cast and was burned by the gas. He died in the Miners' Hospital, March 29.
July 6	Albert Eisenhardt, ....	American,...	Machinist, ..	35	M.	1	7	No. 12 L. C. & N. Co.	Schuylkill,....	Killed. He was starting some old timber that had blocked the rock chute in the breaker. When it started, it carried him down the chute with it, killing him. Outside.
14	Mike Lipjack, .....	Hungarian,...	Laborer, .....	26	S.	....	....	No. 11 L. C. & N. Co.	Schuylkill,....	Fatally injured. He started to cross over the bottom of the shaft but was caught by the descending cage. He died in the Miners' Hospital at Ashland, July 17.
27	Hugh McElwane, .....	American,...	Laborer, .....	18	S.	....	....	Audenried No. 4.	Schuylkill,....	Killed. The hoisting machinery broke and lost control of the drum. The loaded car descended the slope and pulled the empty car up the opposite track and over the sheave wheel into the breaker, falling on McElwane and killing him instantly. Outside.
31	Joseph Savage, .....	Lithuanian,...	Driver, .....	18	S.	....	....	Audenried No. 4.	Schuylkill,....	Killed. He was found on the gangway, dead, with his skull fractured. It was supposed that he had been kicked by a runaway car.
Aug. 7	George Yutko, .....	American,...	Engineer, ...	19	S.	....	....	Buck Mountain,...	Schuylkill,....	Fatally injured. He was caught between the burners of a locomotive and an empty trip of cars. He died in the Pottsville Hospital, same day.



Aug.	21	Anthony Stankewicz, ..	Lithuanian, ..	Miner, .....	35	S. ....	Bell, .....	Schuykill, .....	Fatally injured. A stick of dynamite exploded in his hand. He was seriously injured and died in the Pottsville Hospital, same day.
	21	Charles Stankas, .....	Polish, .....	Laborer, .....	30	S. ....	Vulcan, .....	Schuykill, .....	Killed by an explosion of gas.
	21	John Merook, .....	Polish, .....	Miner, .....	30	S. ....	Vulcan, .....	Schuykill, .....	Killed by an explosion of gas.
	31	John O'Neil, .....	American, ..	Slate picker, ..	15	S. ....	Silver Creek, ...	Schuykill, .....	Suffocated. He went down in the pea coal chute to play with a comrade. The coal loaders began to draw the coal from the chute and he was carried down with the coal. Outside.
Sept.	1	Oliver Fritz, .....	German, .....	Miner, .....	30	M. 1	No. 5 Honey Brook.	Schuykill, .....	Fatally injured by premature explosion of dynamite. He died in the Hazleton hospital, September 2.
	8	Elmer Wink, .....	American, ..	Laborer, .....	22	S. ....	No. 14 L. C. & N. Co.	Schuykill, .....	Killed. He was working for a miner in the rock gangway, connecting the water and coal shafts, when a piece of roof fell on him.
	13	James Rellly, Jr., ...	American, ..	Jig runner, ..	17	S. ....	No. 10 L. C. & N. Co.	Schuykill, .....	Fatally injured. He was passing between the bumpers of a trip of empty cars at bottom of plane. The cars were forced together by being struck by an empty car coming from plane and his leg was crushed. He was taken to Ashland Hospital, and died September 13, Outside.
Oct.	16	Adam Walavitch, .....	Lithuanian, ..	Miner, .....	45	M. 1	Middle Lehigh, ..	Schuykill, .....	Fatally injured. He was caught between the rope and a prop on top of No. 8 inside slope. He died same day.
	22	Michael Govern, .....	Polish, .....	Water tender, ..	22	S. ....	Kaska William, ..	Schuykill, .....	Fatally injured. He was caught on the revolving jig shaft and his injuries injured. He died from his injuries in the Pottsville Hospital, same day. Outside.
	25	Anthony Savage, .....	Polish, .....	Miner, .....	55	S. ....	Vulcan, .....	Schuykill, .....	Fatally injured. He was burned by an explosion of gas in breast No. 54, West Truck Mountain vein, No. 4 lift.
Nov.	9	Elmer Hoffa, .....	American, ..	Carpenter, ..	36	S. ....	No. 8 L. C. & N. Co.	Schuykill, .....	Killed by an explosion of dynamite in the Supply House, Outside.
	23	Anthony Gregites, .....	Polish, .....	Miner, .....	49	M. 1	Silver Creek, ...	Schuykill, .....	Killed. He was suffocated by a rush of fine coal from the top of a chute. He was repairing in West Top split, No. 4 plane.
	23	John Andrew Novish, ..	Hungarian, ..	Driver, .....	19	S. ....	Morea, .....	Schuykill, .....	Killed. He was caught between a loaded mine car and gangway timber.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 6	John Smart, .....	Russian,.....	Driver, .....	20	S.	Andenried No. 4,	Schuylkill,.....	Leg fractured. A piece of rock fell off car in No. 2 stripping and struck him on the leg. Outside.
9	David Reese, .....	American,.....	Bottom man, ..	26	M.	Maryd, .....	Schuylkill,.....	Skull fractured. A piece of coal rolled down and struck him.
12	Joseph Beyorick, .....	Polish,.....	Miner, .....	27	M.	Morea, .....	Schuylkill,.....	Shoulder blade fractured. A piece of roof fell that he was standing a prop under and the prop in falling struck him.
13	Mike Shomrock, .....	Hungarian,.....	Driver, .....	18	S.	Maryd, .....	Schuylkill,.....	Finger cut off. Caught between lever and car that he was assisting to put on track.
13	Henry Welcker, .....	German,.....	Miner, .....	46	M.	Maryd, .....	Schuylkill,.....	Arm broken. Fell off car while coming up the slope.
18	Hugh Freil, .....	Irish,.....	Repairman, ..	59	M.	Buck Mountain, ..	Schuylkill,.....	Leg broken. Caught between mine car and rock on low side of gangway.
19	James Early, .....	American,.....	Engineer, .....	22	M.	Morea, .....	Schuylkill,.....	Leg and back scalded by steam. A piece of rock fell off mine car, rolled under the locomotive and coming in contact with steam pipe broke it. The escaping steam scalded him. Outside.
19	James Grisweld, .....	Polish,.....	Miner, .....	28	M.	Vulcan, .....	Schuylkill,.....	Back injured. A piece of coal fell on him at face of breast.
29	John G. Shidren, .....	American,.....	Miner, .....	33	M.	No. 10, L. C. & N. Co. Maryd, .....	Schuylkill,.....	Hands and faces burned by gas. In removing gas it came in contact with an open lamp.
29	John Sowack, .....	Slavonian,.....	Miner, .....	38	M.			Struck by falling tree he was cutting down near top of slope.
29	Andrew Dolick, .....	Slavonian,.....	Laborer, .....	44	M.			Outside.
Feb. 17	Alex. Cromyock, .....	Polish,.....	.....	32	M.	.....	.....	Thumbed and forefinger on right hand cut off. Caught between mine cars. Outside.
26	Frank Brobeck, .....	American,.....	Patcher, .....	19	S.	Honey Brook No. 5,	Schuylkill,.....	Head and face cut. Fell down manway in getting away from a shot.
27	William Dubrawalsky, ..	Lithuanian,.....	Miner, .....	43	M.	Kaska William, ..	Schuylkill,.....	Wrist broken. Arm caught between
March 1	William Dillow, .....	American,.....	Miner, .....	29	M.	Silver Creek, .....	Schuylkill,.....	bugsy and top rock.

March	2	Mike Drother, .....	Polish, .....	Slate picker, .....	15	S.	Silver Creek, .....	Schuykill, .....	Ankle dislocated. Foot caught in jig conveyor. Outside.
	5	John Shustake, .....	Slavonian, .....	Laborer, .....	29	S.	No. 10 L. C. & N. Co.	Schuykill, .....	Back and ribs severely injured. He fell to the gangway from a truck while traveling at a high speed.
	6	Henry Kulman, .....	American, .....	Miner, .....	27	M.	Vulcan, .....	Schuykill, .....	Leg broken. A piece of slate fell on him at face of breast.
	7	Mike Shinconas, .....	Polish, .....	Bottom-man, .....	21	S.	Silver Creek, .....	Schuykill, .....	Leg broken. A piece of timber he was lifting in a car fell back on him.
	9	John Smor, .....	Russian, .....	Laborer, .....	20	S.	Audenried No. 4, .....	Schuykill, .....	Leg broken. A piece of rock rolled down face of stripping and struck him. Outside.
	12	Mike Shugites, .....	Polish, .....	Driver, .....	27	S.	Back Mountain, .....	Schuykill, .....	Shoulder dislocated. Kicked by mule. Knee-cap broken. He was caught between the bumpers of two loaded cars.
	13	Lewis Dinsfris, .....	Italian, .....	Loader, .....	28	M.	Silver Creek, .....	Schuykill, .....	Leg cut off. He jumped off the trip of mine cars and fell under the wheels. Outside.
	13	Frank Mardur, .....	Austrian, .....	Laborer, .....	41	S.	Oneida, .....	Schuykill, .....	Head and neck cut. Fall of coal caught him in breast manway.
	14	John Ragon, .....	Slavonian, .....	Miner, .....	45	M.	Oneida No. 1 slope, .....	Schuykill, .....	Hands and face burned by gas. Stripped his safety lamp to have better light to work in.
	21	Samuel Liewellyn, .....	American, .....	Miner, .....	30	M.	No. 10, L. C. & N. Co.	Schuykill, .....	Hands and face burned by gas. He was working at face of breast with naked lamp when the top coal fell and brought gas down on naked light.
	24	Mike Metro, .....	Slavonian, .....	Miner, .....	32	M.	No. 10, L. C. & N. Co.	Schuykill, .....	Hands and face burned by gas. He was working with Metro and was burned in the same manner.
	25	Andrew Foylick, .....	Slavonian, .....	Miner, .....	27	M.	No. 10, L. C. & N. Co.	Schuykill, .....	Face burned by gas. He was working in a chute with a naked lamp on his head and ignited the gas.
	26	Adolf Bonenberger, .....	German, .....	Miner, .....	36	M.	Kaska William, .....	Schuykill, .....	Back and legs injured. Caught between mine car and gangway timber.
April	3	James Murby, .....	American, .....	Driver, .....	6	S.	Kaska William, .....	Schuykill, .....	Brised around kidneys. The plank on which he was standing to fix steam pipe broke and he fell a distance of eighteen feet. Outside.
	12	Christ Mader, .....	American, .....	Engineer, .....	3	M.	Silver Creek, .....	Schuykill, .....	Body bruised. A piece of slate fell on him at face of airway.
May	18	Al. Seochullars, .....	Polish, .....	Miner, .....	3	M.	Middle Lehigh, .....	Schuykill, .....	Leg cut. A piece of slate fell on him at face of breast.
	20	Mike Smigo, .....	Polish, .....	Miner, .....	3	M.	Vulcan, .....	Schuykill, .....	Body bruised. Caught between center prop on turnout and mine car.
June	21	Ray Rubright, .....	American, .....	Driver, .....	15	S.	No. 10, L. C. & N. Co.	Schuykill, .....	Leg broken. A piece of coal fell on him at mouth of heading he was starting in pillar.
	12	Joseph Penjules, .....	Polish, .....	Miner, .....	3	S.	Eagle Hill, .....	Schuykill, .....	Leg broken. A piece of slate in middle of vein fell on him.
	14	Mike Nickolskie, .....	Polish, .....	Miner, .....	36	M.	Silver Creek, .....	Schuykill, .....	Hands and face burned by flue dust. A rush of flue dust came on him while cleaning from under the boilers. Outside.
	19	John Burohoek, .....	Polish, .....	Slatepicker, .....	37	S.	Kaska William, .....	Schuykill, .....	

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
June 29	Charles Sommer, .....	Polish, .....	Runner, .....	17	S.	Silver Creek, .....	Schuy/kill, .....	Legs bruised. He was standing between bumpers of mine cars while in motion, and from car jumped off the track and he was caught between bumpers.
30	John Bailey, .....	English, .....	Assistant mine foreman, .....	46	M.	Silver Creek, .....	Schuy/kill, .....	Fingers broken and bruised.
30	Carman Letta, .....	Italian, .....	Laborer, .....	48	M.	Honey Brook No. 5, .....	Schuy/kill, .....	Caught under edge of coal at bottom of shaft. Arm broken. A piece of coal rolled down face of stripping and struck him. Out-side.
July 5	John Battick, .....	Slavonian, .....	Repairman, .....	36	M.	Mary's .....	Schuy/kill, .....	Scalp cut. Fell down the slope.
9	Stiney Rusok, .....	Polish, .....	Miner, .....	22	S.	Buck Mountain ..	Schuy/kill, .....	Face and hands cut by a premature blast of dynamite.
12	Anthony Monahan, .....	Irish, .....	Roadman, .....	27	S.	Eagle Hill, .....	Schuy/kill, .....	Arm broken. Arm caught between mine car and gangway collar.
13	Metro Byluck, .....	Austrian, .....	Miner, .....	30	M.	Buck Mountain, ..	Schuy/kill, .....	Hands burned and bruised by a premature blast.
13	Stephen Vorcheck, .....	Austrian, .....	Laborer, .....	24	S.	Buck Mountain, ..	Schuy/kill, .....	Arm fractured. He was assisting Byluck to tamp the hole in the chute when it exploded.
24	Joseph Boodie, .....	Slavonian, .....	Miner, .....	35	M.	Audenried No. 4, ..	Schuy/kill, .....	Injured about head and chest. He was tamping a hole that was charged with dynamite, with an iron bar, when it exploded.
24	Paul Cotch, .....	Polish, .....	Miner, .....	30	M.	Kaska William, ..	Schuy/kill, .....	Head and face cut. He returned too soon to face of breast after a shot had been fired and was struck in the head and face by the blast of the breast.
25	William Woleskey, .....	Lithuanian, .....	Miner, .....	35	M.	Kaska William, ..	Schuy/kill, .....	Injured about the head. He was overcome by powder smoke at face of breast and fell down the manway.
25	William Cahnecavage, .....	Russian, .....	Miner, .....	38	M.	Kaska William, ..	Schuy/kill, .....	Head and body injured. He returned after a blast to face of breast and was overcome by powder smoke and fell down the manway.
Aug. 11	Andrew Sholkas, .....	Polish, .....	Laborer, .....	20	S.	Vulcan, .....	Schuy/kill, .....	Body bruised. Caught by mine car and platform on high side of gangway.

Aug.	13	Paul Greggor, .....	Slavonian, .....	Laborer, .....	55	M.	Sebastopol, .....	Schuykill, .....	Ribs broken. Caught by mine car and collar on slope.
	15	Harry Smith, .....	American, .....	Miner, .....	35	M.	East Lehigh, .....	Schuykill, .....	Head badly bruised. Slipped and fell down the manway a distance of seventy feet on dip of seventy-five degrees.
	20	Matthew Strubus, .....	Polish, .....	Laborer, .....	22	S.	Morea, .....	Schuykill, .....	Head and face cut. A piece of coal fell on him at face of breast.
	21	Frank Brennan, .....	American, .....	Miner, .....	25	M.	Vulcan, .....	Schuykill, .....	Burned by gas. Ignited traveling gas in return airway.
	21	Mike Curtis, .....	Irish, .....	Repairman, ..	29	M.	Vulcan, .....	Schuykill, .....	Hands and face burned by gas on No. 3 level, ignited by Frank Brennan on the 4th level.
	21	William B. Jones, .....	Welsh, .....	Assistant fire boss, .....	38	M.	Vulcan, .....	Schuykill, .....	Hands and face burned by gas on 3d level, ignited by Frank Brennan on 4th level.
	25	Anthony Rosstney, .....	Italian, .....	Miner, .....	26	S.	Silver Creek, .....	Schuykill, .....	Face and hands burned by gas. He went up to his breast in the morning with a red light, and ignited the gas.
Sept.	24	John Yamco, .....	Slavonian, .....	Miner, .....	32	M.	Morea, .....	Schuykill, .....	Ignited. A fall of coal in the breast killed down the manway and struck him.
Oct.	6	Con. Motlavage, .....	Polish, .....	Miner, .....	41	S.	Silver Creek, .....	Schuykill, .....	Face and head cut. He lighted the fuses of two holes. He returned, thinking the two holes had exploded, but only one had exploded. The other exploded when he returned to the face of the gangway.
	11	George Goodhead, .....	English, .....	Miner, .....	40	S.	Buck Mountain, ..	Schuykill, .....	Head cut. A piece of rock fell on his face and hands burned by gas. He was cleaning up a fall of clod out of his chute, twenty feet from face of breast, when the top slate fell and brought the gas down on his naked lamp.
	11	John Wastowjick, .....	Russian, .....	Miner, .....	28	M.	Buck Mountain, ..	Schuykill, .....	Large toe cut off. A piece of coal fell on his foot at face of breast.
	15	John Motokus, .....	Russian, .....	Laborer, .....	25	S.	Buck Mountain, ..	Schuykill, .....	Hand blown off by a premature blast in face of gangway.
	16	August Kinseck, .....	Austrian, .....	Miner, .....	28	S.	Vulcan, .....	Schuykill, .....	Bark hurt. A piece of rock fell on him in tunnel.
	17	Frank Thomas, .....	Italian, .....	Rock miner, ..	27	S.	Kaska William, ..	Schuykill, .....	Back and legs bruised. He cut his squib short and before he could reach a place struck him, pieces of coal from blast.
	22	Mike Orchinous, .....	Hungarian, .....	Miner, .....	35	S.	Honey Brook No. 5, ..	Schuykill, .....	Foot cut. A piece of slate fell on his foot at face of breast.
Nov.	3	Joseph Shya, .....	Polish, .....	Laborer, .....	27	M.	Vulcan, .....	Schuykill, .....	Laceration of head by an explosion of dynamite in supply house. Outside.
	9	A. M. Selders, .....	American, .....	Lineman, .....	30	M.	No. 8, L. C. & N. Co.,	Schuykill, .....	Leg fractured. Horse fell on him while taking it to barn. Outside.
	14	Fred. Riffen, .....	Slavonian, .....	Driver, .....	17	S.	Honey Brook No. 6, ..	Schuykill, .....	Head cut and knee injured. In doing some timbering on the gangway, loose coal fell on him.
	16	Michael Breslin, .....	American, .....	Timberman, ..	32	S.	No. 8, L. C. & N. Co.,	Schuykill, .....	Arm fractured. Stepped on sprag and fell on the bottom turnout.
	17	Peter Rilko, .....	American, .....	Driver, .....	18	S.	Onelda No. 3, ....	Schuykill, .....	



TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Nov. 21	Mike Murla, .....	Slavonian, .....	Driver, .....	22	S.	No. 8, L. C. & N. Co.	Schuylkill, .....	Collar bone broken. Caught between mine car and low side of gangway.
22	Paul Dumal, .....	Slavonian, .....	Miner, .....	40	M.	Audenried No. 4, ..	Schuylkill, .....	Hip dislocated. A piece of top slate fell on him in the gangway.
22	Joseph Youkaski, .....	Polish, .....	Driver, .....	22	M.	Audenried No. 4, ..	Schuylkill, .....	Foot bruised by fall of top coal at face of breast.
23	Salvadore Riale, .....	Italian, .....	Slatepicker, ..	14	S.	Audenried No. 4, ..	Schuylkill, .....	Breast bone injured. Caught in conveyor line while in motion. Outside.
Dec. 7	Con. Czepowitch, .....	Lithuanian, .....	Miner, .....	40	M.	Kaska William, ...	Schuylkill, .....	Head and hands bruised. He fell down the manway of his breast.
20	Theodore Adamavago, ..	Lithuanian, .....	Miner, .....	32	S.	Kaska William, ...	Schuylkill, .....	Hands and face burned by gas. Went into breast with a naked lamp after having been cautioned not to do so by fire boss, and ignited the gas.
22	Anthony Vilko, .....	Polish, .....	Miner, .....	43	M.	Audenried No. 4, ..	Schuylkill, .....	Contusion of right leg. A piece of coal fell on him at face of breast.
29	Simon Yepiness, .....	Lithuanian, .....	Laborer, .....	20	S.	Kaska William, ...	Schuylkill, .....	Head and back injured. A piece of rock fell on him at face of breast.
29	Alex. Kerr, .....	Slavonian, .....	Driver, .....	19	S.	No. 8, L. C. & N. Co.	Schuylkill, .....	Hip and body bruised. Caught between mine car and upper side of gangway.
29	Mike Sots, .....	Hungarian, .....	Driver, .....	17	S.	No. 11, L. C. & N. Co.	Schuylkill, .....	Arm cut off. Fell under the rock dumper while taking a loaded car out of end of bank and wheel passed over his arm. Outside.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

January 22, Eagle Hill Colliery, John Wasnel, Polish, miner, was fatally injured. He was driving the East 7-foot gangway going west from the inside tunnel. The evening before he had put a set of timber close to the face of the gangway. He resumed work the next morning, and had taken out the coal close to the top slate, when a piece of the slate from the lower side fell and struck him, injuring both his hips. He died on the way to the Pottsville Hospital.

February 24, Joseph Duscavage, Lithuanian, miner, was killed by fall of slate at Buck Mountain Colliery. He was working in the top split of the Mammoth vein. In the center of the vein there is a piece of slate a foot thick. He undermined this for a distance of 8 feet, which was entirely too far to go under it. He then drilled a hole in it and went down to the heading for powder. On returning to the face of the breast, the pitch being light, he walked into the center of the breast. When he came to the place where the hole was drilled, the slate fell on him, killing him instantly.

September 8, Elmer Wink, American, laborer, No. 14 shaft, Lehigh Coal and Navigation Company, was fatally injured by fall of roof while he was in rock gangway connecting the water and coal shafts. He died at his home in Tamaqua same day. He was standing on the low side of the gangway, when a piece of rock fell from the top and high side. It struck the bottom, turned over and struck him on the side. The miner claims that he had examined the place and considered it safe.

## Cars

January 2, Alvin Lithgrow, American, fireman on a locomotive hauling coal from the top of the inside slope at No. 10 colliery, Lehigh Coal and Navigation Company, to the breaker, was killed. The engine had brought an empty trip of cars to the turnout near the top of the slope. He uncoupled the engine from the empty cars to run it over on the loaded track to push the loaded trip out to the breaker, but when he stepped on the front of the engine, to cross over, he fell on the cross rail. A bar that is under the engine and within four inches of the rail caught and squeezed him.

February 21, Alexander Socofskie, Polish, laborer, Silver Creek Colliery, was fatally injured. He was on his way to work on the night shift, and got on the back end of a timber car to ride up the timber plane. When he was about 150 feet from the bottom, the rope broke, and being unable to jump off the car, he went to the bottom with it. His legs were broken and he was also injured internally. He died same day.

March 5, Theodore Powalkis, Polish, driver, was fatally injured at Silver Creek Colliery. He was employed on the bottom of No. 4 plane. He was standing on the front of an empty car, driving lively. The car before taking its position on the straight track comes close to the timber. At this point he permitted his body to extend outside the line of the car, and he was caught between the car and the high side of the gangway. His lungs were ruptured and he died same day.

July 14, Michael Lipjack, Hungarian, laborer, No. 11 Colliery, Lehigh Coal and Navigation Company, was fatally injured, and died in the Miners' Hospital, July 17. He was coming out of the gangway after finishing his day's work. There were several men with him, and they were walking in single file along the gangway. When they approached the bottom of the shaft the men in front passed around the shaft to the high side, which was the right way to get from one side of the shaft to the other. Lipjack, it appears, did not notice which way the men turned, or else he forgot himself and started to go through the hoistways of the shaft. At the same time an empty cage with a car on it came down the shaft and caught him under it in the pit. No one saw him until after the accident had occurred.

August 7, George Yutko, American, engineer on air locomotive at Buck Mountain Colliery, Mill Creek Coal Company, was fatally injured, and died in the Pottsville Hospital same day. He was coming backward on the bottom turnout on the third lift with an engine to couple it to an empty trip of mine cars. When close to the cars that were coming down a light grade, he caught the reverse lever, so he thought, to slow up the engine. Instead of the reverse lever, he caught the brake lever. This came back much farther than the reverse lever would have done and took him unawares. He lost his balance, which threw his legs around in front of the bumpers, and they were crushed between the bumpers of the engine and empty cars. He was taken to the Pottsville Hospital, but died before his leg could be amputated.

July 21, James Reilly, Jr., American, jig runner, No. 10 breaker, Lehigh Coal and Navigation Company, was fatally injured. He had occasion to leave his place of work, and to reach his place of destination he had to pass between the bumpers of an empty trip of cars. The cars were standing on a slight incline, and were not together. As he was passing between them, an empty car was added to the trip, which forced all the cars together. His leg was caught and crushed at the knee joint. He was taken to the Miners' Hospital, Ashland, where it was amputated. It had healed, and he was thought to be out of danger, but he had a sudden relapse, and died September 13.

November 23, John Andrew Novish, Hungarian, driver, Morea Colliery, Dodson Coal Company, was killed by being caught between a mine car and a gangway leg on the East curve of the East Buck Mountain vein, No. 3 inside slope. He was changing some empty cars on the East curve close to the bottom turnout. There was a sharp grade on the curve, and he put two sprags in the front car on the short side of the curve. This pulled the car to the low side, which brought it very close to the gangway leg. In some manner his head was caught between the gangway leg and the car, and his skull was fractured. He had been doing this work but a short time.

### Explosions of Gas

February 3, John Machunes, Polish, miner, was fatally injured by an explosion of gas in the Vulcan Colliery. He was taking out pillars in No. 3, East Buck Mountain vein. The evening previous



to the accident he told the foreman that he thought there was black damp in his place, as the flame on his lamp had been very large all day. The foreman told him not to go up in his breast in the morning before it was examined. Machunes and his fellow-workmen went to work very early the next morning, and before any one had examined the place they went into it with a naked lamp, igniting the gas. Machunes was badly burned, and was taken to the Miners' Hospital, Ashland. He died next day.

March 21, Andrew Duncan, American, miner, No. 10 Colliery, Lehigh Coal and Navigation Company, was fatally burned by gas, and died at the Miners' Hospital, March 29. He was working in No. 6 breast, West Big vein, new shaft. At the time of the explosion he was making some repairs in the manway of his breast some distance from the face. His partner, Samuel Llewellyn, was tamping a hole in the face of the breast, but on the opposite side from where he was working. The miners in this section of the mine are supposed to have their safety lamps locked, and to work with no other lamp. After the explosion Llewellyn's lamp was found to be unlocked and the cup screwed off, which showed that he had been working with an open light. He acknowledged that he had lighted some feeders of gas that connected with the gas in the top that had caused the explosion. There is no doubt that there was a great quantity of gas lodged in the top of the vein. The vein is from 80 to 100 feet thick, and at times it is impossible to keep the gas from accumulating.

August 21, John Merook, Polish, miner, Vulcan Colliery, was killed by being struck by a piece of sheet iron that was hurled around by an explosion of gas. He was working in No. 2 breast, East Skidmore, on No. 5 lift. He heard an explosion of gas in No. 8 breast, Buck Mountain vein, and went out through the tunnel opposite No. 8 breast to see what caused the explosion, and to give help if necessary. Just as he came to the place where the injured men were on the Buck Mountain gangway, a second explosion occurred. It was probably caused by some material remaining on fire until more gas accumulated. The explosion hurled a piece of sheet iron with such force that when it struck him it killed him instantly.

August 21, Charles Stankas, Polish, laborer, Vulcan Colliery, Mill Creek Coal Company, was killed by an explosion of gas. He was working for Frank Brennan, who was stripping No. 8 breast, which had been driven out narrow to the fourth from the fifth lift, that it might be used for a traveling way. The miner in No. 13 breast, on the inside of them, fired a shot that caused the breast to rise up in the middle about 20 feet, liberating a large quantity of gas that moved swiftly towards No. 8 breast. It was there ignited by the naked lamp used by Brennan and Stankas, causing an explosion. The explosion hurled Stankas around, striking him against a pillar and killing him instantly.

October 25, Anthony Savage, Polish, miner, Vulcan Colliery, Mill Creek Coal Company, was fatally burned by an explosion of gas, and died in the Miners' Hospital at Ashland, November 2. He was driving the second heading on the outside pillar of breast No. 54, fourth lift, West Buck Mountain vein. He had worked all day until it was time to quit work. He had been instructed not to use a naked lamp. It is supposed that he disobeyed this order, and with his naked

lamp he ignited the gas that accumulated along the face of the breast, causing the explosion. When he left the colliery it was thought that his injuries would keep him from work but a short time.

### Suffocations

August 31, John O'Neil, American, slate picker boy, was suffocated in the pea coal chute at Silver Creek Colliery. He went down in the chute for some purpose unknown to the boss. While he was down there running around on the coal the car loaders beneath the breaker commenced to load coal. It rushed down the chute so fast that O'Neil could not escape, and was carried down with it. Before he could be rescued he was suffocated.

November 23, Anthony Gregites, Polish, miner, Silver Creek Colliery, Philadelphia and Reading Coal and Iron Company, was suffocated by a rush of fine coal. He was repairing No. 5 chute, West Top bench, No. 4 plane. The vein was 18 to 20 feet thick and of a shelly nature. He had put one set of timber in, and was making room for another, when the top broke down and rushed on him, suffocating him. If the gangwayman, who was close by, had used proper judgment, that is, drawn the coal from the bottom of the chute and put it on the gangway, Gregites might have been saved.

### Explosions of Dynamite

March 8, Raymond Pencarie, Tyrolean, miner, No. 8 Colliery, Lehigh Coal and Navigation Company, was fatally injured by a blast. He had fired a blast in the center of No. 55 rock chute, in the crack vein, on the plane level, the evening before the accident. All the powder in one of the holes did not explode. The next morning he and his fellow-workman started to drill a hole on each rib of the chute, and when they had nearly finished drilling his fellow-workman went to get a charge for both holes. While alone Pencarie placed a drill in the hole that remained from the blast of the evening before, and when he struck the drill the dynamite exploded. He died from his injuries shortly after being taken from the mines.

August 21, Anthony Stankewicz, Lithuanian, miner, was fatally injured at Bell Colliery by dynamite, and died August 27. He was standing in the monkey heading with a stick of dynamite in his hand, preparing to go up in his breast, when the dynamite exploded, blowing out his eyes and his one hand off. Neither he nor his fellow-workmen could give any explanation as to the cause of the explosion.

September 1, Oliver Fritz, German, miner, Green Mountain Section of No. 5 Honey Brook Colliery, Lehigh and Wilkes-Barre Coal Company, was fatally injured by an explosion of dynamite, and died in Hazleton Hospital next day. When he was preparing a charge of dynamite, a box containing from forty to fifty exploders went off in his hand. One of his legs was cut off and both hands were partly torn off.

November 9, Elmer Hoffa, American, carpenter and assistant outside foreman, was fatally injured by an explosion of dynamite in the supply house at No. 8 Colliery, Lehigh Coal and Navigation Company. He died same evening. A man by the name of Seiders, who was



employed in the Electric Department, came to the breaker and asked for some dynamite. Hoffa went to get him some that had come through with the coal from time to time from the inside workings. This he had stored away in a box on a shelf in a part of the supply house used by the outside foreman for an office. He gave Seiders two sticks of the dynamite and walked to the door with him. Seiders had just taken a few steps from the office when the explosion occurred. It could not be ascertained whether or not Hoffa had returned to the office to put away the remainder of the powder, and had let it drop, causing the explosion. The powder was of high-grade dynamite, the temperature of the room was high at the time the accident occurred. The room was heated by live steam.

### Falling Down Slopes

February 2, Paul Vosick, Slavonian, laborer, No. 2 Diamond slope, Maryd Colliery, was killed. He was working in No. 2 Diamond slope. The miner and two laborers came up to the top for a set of slope timber. They were using the sinking car to take down the timber. The back end of the car was higher than the front, and was planked up for about two feet to keep the coal from rolling out when the car was loaded. Vosick was standing in the car to take the piece of timber when handed to him. The miner was fixing the rope around the snub. The rope was also attached to the piece of timber that was to be taken down. When he heard some one shout. He asked the other laborer where Vosick was, and he replied, "I guess he fell down the slope." The slope was down 120 feet on an angle of 62 degrees. Vosick was found at the bottom, dead, with his skull fractured.

### Kicked by Mule

July 31, Joseph Savage, Lithuanian, driver, No. 4 Colliery, Lehigh and Wilkes-Barre Coal Company, Audenried, was killed. He was driving in the East Buck Mountain gangway, No. 2 slope, No. 1 lift, north of fault. The accident occurred on the night shift. He had taken a loaded car out of the gangway to bring back an empty one, so that the men could continue their work. After waiting a reasonable time for him to bring back the empty car, the man who had charge of the gangway went out to see what was delaying him. After walking back about 500 feet he found him lying on the side of the track by the loaded car. From his condition it was supposed that he had been kicked by a mule. His skull was fractured.

### Machinery

October 22, Michael Govern, Polish, water tender, Kaska William Colliery, T. M. Dodson Coal Company, was fatally injured, and died same day in Pottsville Hospital. When the water pipe leading into the pea coal jig became blocked, he went to remove the obstruction. Instead of going out of the jig the way he had come in, he climbed to the top of the jig for some unknown reason, and was caught by a clamp on the shaft that runs the jigs. The clamp was put there for the purpose of holding in place the keys that fasten the chains that run the jig.

## Miscellaneous

March 8, William Morgan, American, switch tender, No. 11 Colliery, Lehigh Coal and Navigation Company, was fatally injured, and died at his home in Coal Dale, March 9. He was riding on the last car of an empty trip that was going into the West D vein. The trip was being hauled by a locomotive, and was traveling at great speed. The last car of the trip jumped the track and knocked out a set of gangway timber. The collar of the set fell on him and fractured his skull.

July 6, Albert Eisenhardt, American, machinist, No. 12 Colliery, Lehigh Coal and Navigation Company, was killed. He was trying to start some old timber that was blocked in the rock chute when the accident occurred. This timber had been hoisted up the slope and dumped out of the gunboat into the chute. The man who had charge of the work was not able to loosen the timber, and as a result the rock was blocked and the work delayed. Eisenhardt got into the chute, which pitched 28 degrees, and stood on the timbers to pry them apart. After he separated them and they started to move they moved rapidly. He lost his balance and fell between the timbers, his head lodging between two pieces. His neck was broken and his skull fractured.

July 27, Hugh McElwane, American, laborer, occupied in the breaker at No. 4 Colliery, Lehigh and Wilkes-Barre Coal Company, Audenried, to do general work, was killed. The hoisting engine at the colliery is placed 100 feet back from the breaker. The rope for hoisting the coal out of the slope passes directly over the center of the breaker and down into the slope. This gives them the advantage of dumping the coal automatically on the platform to be separated. At the time the accident occurred they were hoisting a loaded car up the slope. The pinion wheel of the hoisting engine broke, and parts of it fell on the brake band and destroyed its effectiveness in holding the drum. The loaded car being free from restraint went back down the slope and pulled the empty car over the top sheave of the breaker, disconnecting the rope from the car and letting it drop down into the breaker on McElvaine, killing him instantly.

October 16, Adam Walavitch, Lithuanian, miner, No. 8 Basin slope, Middle Lehigh, Mill Creek Coal Company, was fatally injured, and died two hours later. He was riding up the inside slope on a loaded car. When near the top he called to the top man and said he would unhitch the chain from the car. The rope was attached to the car by a center hitch. He failed to get the hook out of the center plate, and becoming excited, he jumped across the rope to the high side and was caught between the prop and the rope. If he had jumped to the low side he would have escaped without being injured.

## CONDITION OF COLLIERIES AND IMPROVEMENTS

## MILL CREEK COAL COMPANY

Buck Mountain Colliery.—A tunnel has been driven from the Buck Mountain vein, fifth level, north dip, to the Skidmore vein. It has been completed a distance of 296 feet. Total length will be about

400 feet. A plane gangway has been driven in the Top split of Mammoth vein from the fourth level toward the third level, and from the third level upwards. The two gangways are in a direct line, and when completed the plane will have a length of 1,800 feet. Ventilation good; drainage could be improved.

Vulcan Colliery.—The tunnel, fourth level, north dip, from Bottom split of Mammoth vein, to top split of mammoth vein, south dip, has been completed. The total length of tunnel is 611 feet. The pumping plant has been improved by the addition of larger high pressure cylinders to the Jeanesville compound pump at the third level; and also by the addition of a large Jeanesville condenser. At the fourth level a Goyne pump, 24 x 10 x 36, has been installed. An additional 6-inch steam line has been extended from the surface to the second level. A 16-foot ventilating fan was erected on the Top split of Mammoth vein, steam being conveyed through 1,809 feet of 3-inch pipe from the main boiler plant. This fan is reversible, and can be used either as an exhaust or pressure fan. It ventilates particularly the fourth level workings. Ventilation good; drainage poor.

Middle Lehigh Colliery.—The new breaker was put in operation in September, and a slope sunk 230 feet from the third level, Buck Mountain vein, north dip, and, in addition to the new gangway driven about 8,000 feet of old gangways were reopened. A Goyne pump, 24 x 10 x 36, was placed at the first level. Stripping operations were commenced on the outcrop of the Buck Mountain vein to the east. The plant consists of a steam shovel, locomotive and dump cars. The artesian well was drilled 500 feet deep to supply boiler feed water. Colliery in fair condition.

#### TRUMAN M. DODSON COAL COMPANY

##### Kaska William Collieries

No. 1 Slope.—The Orchard plane tunnel has been extended south from the apex of the plane a distance of 275 feet, and at a point 150 feet from the apex of the plane a tunnel has been driven east a distance of 120 feet to the basin of the Orchard vein.

No. 2 Shaft.—The tunnel has been extended from the 7-foot vein to the Top split of the Mammoth vein a distance of 50 feet. The east and west gangways have been started, and also two narrow holes, 12 feet wide, are being driven up the pitch, to be utilized for a return airway and second opening from this vein.

The 7-foot airways have been driven up a distance of 350 feet from the gangway slope level, a total distance of 550 feet.

At a distance of 270 feet a tunnel 6 feet by 6 feet has been started south from the west 7-foot airway, to connect with the Top split of the Mammoth vein for ventilation.

A trial slope has been sunk on the Diamond vein at a point about 1,200 feet southeast of the breaker. The total depth of slope is 144 feet, dipping south 46 degrees; thickness of vein 4 feet 7 inches, excellent quality of coal.

There has been considerable improvement in ventilation and drainage in this colliery in the past year.



## PHILADELPHIA AND READING COAL AND IRON COMPANY

Eagle Hill Colliery No. 1.—A tunnel from West bottom split of the Mammoth to Skidmore vein has been completed at a distance of 166 feet.

An air tunnel from West Primrose to Holmes vein has been completed at a distance of 153 feet. This tunnel will be continued to the Skidmore vein.

Eagle Hill Colliery No. 2.—A new level has been turned at a distance of 1,050 feet in rock.

A turnout on west side, with car hoist and back switch, has been completed at a distance of 366 feet.

A turnout and main tunnel on the east side, cutting the 4-foot top, middle and bottom split of the Mammoth, Skidmore and 7-foot veins, is now being driven to Buck Mountain, a distance of 995 feet.

A landing has been completed in the top split of the Mammoth vein, a distance of 1,210 feet down the shaft. Condition of colliery is good.

Silver Creek Colliery.—A tunnel on No. 4 Plane level from East Skidmore vein to connect with tunnel from bottom split to middle split of the Mammoth vein has been completed at a distance of 100 feet.

A tunnel on No. 4 Plane level, east middle split of Mammoth vein, to top split of the Mammoth vein, has been completed at a distance of 142 feet.

A tunnel on No. 1 Plane level from East Skidmore to bottom split of the Mammoth vein has been completed at a distance of 120 feet.

A tunnel on shaft level from east bottom split of Mammoth to middle split of the Mammoth is now being driven.

A tunnel on No. 3 plane level from West Skidmore vein, north dip, is now being driven to Skidmore, south dip, through the Windy Harbor basin, cutting bottom and middle split of Mammoth vein, on the north and south dips.

A tunnel on No. 1 Plane level to Windy Harbor basin, mentioned in last year's report, is stopped for the present, but will be continued to Buck Mountain vein. The distance when stopped was 844 feet. No vein cut since last year's report. Condition of colliery is excellent.

## MARYD COAL COMPANY

Maryd Colliery.—No 1 slope, the 18x36 inch first motion hoisting engines were changed to second motion with 9-foot drum. A 200-horse-power battery of Stirling boilers was installed.

Tunnel was driven north on second level from bottom split of Mammoth, cutting Skidmore and Seven Foot veins. The northern end of tunnel, from slope to shaft basin, is being driven from this slope, and southern end from No. 2 slope.

No. 2 Slope.—A pair of second motion hoisting engines, 22x36 inches, and 18-foot exhaust fan were installed.

The old Segara Primrose slope was pumped out and sunk to elevation of first level of shaft, and tunnel driven south, cutting overlying vein.

No. 3 Slope.—A pair of 16x30 inch hoisting engines and 8-foot fan installed.

Slope was sunk 388 feet in Diamond vein in shaft basin, level established and gangway driven west in Diamond vein, and tunnel south to Tracy vein.

Ten hundred and sixty-three feet of tunnel were driven during the year.

No. 2 Coal Plane.—A pair of 14x18 inch hoisting engines were installed.

A main boiler plant and additional 200-horse-power battery of Stirling boilers were put in operation.

On the 17th of January, a portion of breaker was destroyed by fire. Breaker was rebuilt and enlarged by addition of cleaner and two 54-inch conveyor lines, and resumed the preparation of coal on December 1, 1906.

Condition of colliery fair; drainage poor.

#### SLATTERY BROTHERS COAL COMPANY

Slattery Brothers have reopened the old Randolph tunnel in the Sharp Mountain, south of Port Carbon, a distance of 1,200 feet, and have extended the tunnel 140 feet, cutting two veins in fair condition, and intend to continue driving the tunnel south into the mountain, cutting several more veins.

They have also built a new breaker of 500-ton capacity. They expect to ship coal in the early part of the year 1907.

#### MOSS GLEN COAL COMPANY

Have built a small breaker and sunk a slope 200 feet in a small basin north of the main basin, one mile and a half east of Middleport. The vein averages 5 feet 6 inches, and is of good quality. Condition of colliery is good.

Bell Colliery.—No improvements. Condition of colliery fair.

Oakley Colliery.—No improvements. Condition of colliery fair.

Coal Hill Colliery.—No improvements. Colliery abandoned April 1, 1906.

Greenwood Colliery.—No improvements. No. 13 slope in this colliery has been abandoned and the rails were taken out early in January, 1907. In the future they expect to get their coal above water level. Condition of colliery is fair.

East Lehigh Colliery.—No improvements. Condition of colliery fair.

#### LEHIGH COAL AND NAVIGATION COMPANY

No. 8 Colliery.—A tunnel has been driven from Mammoth vein to Forty Foot vein, a distance of 392 feet, cutting the Forty Foot vein, 208 feet thick, from bottom to top slate. One battery 600-horse-power Stirling boilers installed at colliery.

No. 10 Colliery.—One pair of 42x60 inch water hoisting engines installed.

No. 11 Colliery.—360 feet of tunnel continued north from Mammoth vein. Second level in shaft to work the Red Ash and the Anticlinal north of No. 11 tunnel mouth.

No. 12 Colliery.—1,407 feet of tunnel driven, cutting the Mammoth vein 550 feet vertical, under Foster's tunnel level vein 13 feet thick.

No. 14 Colliery.—Completed coal shaft to a depth of 617 feet, and made a landing at 588 feet. Drove the north tunnel 470 feet and the south tunnel, including car hoist, 387 feet. Completed the water shaft to a depth of 840 feet and made a landing at 815 feet for a sump tunnel. Drove a sump tunnel north 194 feet. Installed one battery 600 horse-power Stirling boilers, one pair 30x60 inch



water hoisting engines and commenced the erection of a new breaker.

Collieries are in fair condition.

#### LEHIGH AND WILKES-BARRE COAL COMPANY

Audenried No. 4 Colliery.—Rock slope 200 feet long from surface to Buck Mountain vein at Tresckow, with necessary hoisting and power plant. Slope has been sunk 160 feet in vein, which is 7 feet thick.

Tunnel, Buck Mountain to Lykens Valley on North dip of No. 1 basin; length 68 feet.

Tunnel Buck Mountain to Lykens, fourth lift, No. 16 slope, length 95 feet.

No. 4 boiler house rebuilt and plant equipped with larger dry pipe and new feed water system, including two 10x6x10 inch Worthington pumps.

Honey Brook No. 5 Colliery.—Tunnel, Gamma to Wharton fourth lift, No. 15 slope, length 84 feet.

Turnout tunnel, Lykens Valley to Lykens Valley second lift, No. 20 slope, length 198 feet.

New slope at Green Mountain acrosspitch in Gamma vein. This slope has been driven across pitch 430 feet from first lift of Old Green Mountain slope to surface, and sunk 100 feet below first lift.

Condition of collieries is good.

Silver Hill Colliery.—One airhole, 6x12x200 feet long, driven to surface in Holmes vein.

A tunnel intended to cut the Mammoth vein from Holmes vein is now being driven, and is 320 feet north of Holmes vein.

A new shaker has been put in the breaker, and a carpenter and blacksmith shop combined, 18x40 feet, has been built.

Oneida Collieries Nos 1, 2 and 3.—No improvements. Condition of collieries good.

Silver Brook Colliery.—Drainage very poor. Abandoned February 5, 1906.

Morea Colliery.—No improvements. Condition of colliery fair.

Sebastopol Colliery.—No improvements. Condition of colliery fair.

#### Mine Foremen's Examinations.

The annual examination for mine foremen and assistant mine foremen was held at the Court House, Pottsville, April 24 and 25. The board was composed of the following members:

John Curran, Inspector, Pottsville; James Tinley, Superintendent, Tamaqua; Nicholas Murrey, miner, Cumbola; John B. Richards, miner, New Philadelphia.

The following persons were recommended for certificates:

#### Mine Foremen

Edward J. Stapleton, Palo Alto.

#### Assistant Mine Foremen

Thomas M. Davis, Mahanoy City; Cornelius C. Boner, Tamaqua; William Hoffman, Tamaqua; John P. Davis, Coal Dale; William Jones, Coal Dale; Edward McShea, Mahanoy City.

# Nineteenth District

SCHUYLKILL COUNTY

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Pottsville, Pa., March 21, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Nineteenth Anthracite District for the year ending December 31, 1906.

Respectfully submitted,

MICHAEL J. BRENNAN,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries,.....	18
Number of mines,.....	48
Number of mines in operation.....	48
Number of tons of coal shipped to market,.....	1,912,798
Number of tons used at mines for steam and heat,.....	346,001
Number of tons sold to local trade and used by employes,.	29,465
Number of tons produced, .....	2,288,264
Number of persons employed inside of mines,.....	4,361
Number of persons employed outside,.....	2,767
Number of fatal accidents inside of mines,.....	13
Number of fatal accidents outside,.....	9
Number of non-fatal accidents inside of mines,.....	33
Number of non-fatal accidents outside,.....	11
Number of tons of coal produced per fatal accident inside,	176,020
Number of persons employed per fatal accident inside, ..	335
Number of persons employed per fatal accident outside,..	307
Number of persons employed per non-fatal accident inside,	132
Number of persons employed per non-fatal accident outside,	252
Number of wives made widows,.....	10
Number of children orphaned,.....	21
Number of steam locomotives used inside of mines,.....	1
Number of steam locomotives used outside,.....	17
Number of electric motors used inside,.....	8
Number of fans in use,.....	33
Number of gaseous mines in operation,.....	32
Number of non-gaseous mines in operation,.....	16
Number of new mines opened,.....	1
Number of old mines reopened, .....	5

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,.....	786,823
St. Clair Coal Company,.....	505,342
Lytle Coal Company,.....	355,413
Buck Run Coal Company,.....	209,698
Oak Hill Coal Company,.....	107,493
Crystal Run Coal Company,.....	51,575
Stoddart Coal Company, .....	45,533
Pine Hill Coal Company,.....	44,008
John H. Davis Company,.....	36,614
Pottsville Coal Company,.....	35,192
Mt. Hope Coal Company,.....	32,450
E. White and Company,.....	31,477
Darkwater Coal Company,.....	29,164
Butcher Creek Coal Company,.....	15,057
Cain Brothers Coal Company,.....	2,425
Total, .....	<u><u>2,288,264</u></u>

Production by Counties

Schuylkill, .....	<u><u>2,288,264</u></u>
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TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident			Number of employees outside per non-fatal accident		
	Inside	Outside	Total	Inside	Outside	Total											
Philadelphia and Reading Coal and Iron Co.,	6	2	8	3	2	5	131,137	131,137	1,996	1,252	3,248	333	626	333	626	626	626
St. Clair Coal Co.,	2	2	4	4	1	5	252,671	129,335	502	334	836	251	187	125	187	334	334
Lytie Coal Co.,	1	1	2	9	1	10	39,490	39,490	596	206	802	293	206	66	293	206	206
Buck Run Coal Co.,	1	1	2	3	1	4	209,698	209,698	293	156	449	293	155	90	155	293	293
Oak Hill Coal Co.,	1	1	2	3	1	4	35,831	35,831	270	145	415	114	114	33	145	145	145
Cryslar Coal Co.,	1	1	2	3	1	4	17,191	17,191	114	104	218	114	36	104	104	104	104
Spring Hill Coal Co.,	3	1	4	2	2	4	22,004	22,004	211	169	370	70	36	106	79	79	79
Pine Hill Coal Co.,	5	1	6	2	2	4	52,460	52,460	113	92	205	113	92	113	46	46	46
Et. Hope Coal Co.,	1	1	2	2	2	4	50,492	50,492	113	50	163	113	82	23	113	23	23
Darkwater Coal Co.,	1	1	2	1	2	3	23,164	23,164	89	152	241	89	82	115	41	41	41
Miscellaneous companies,																	
Totals and averages for district,	12	9	21	33	11	44	176,020	69,341	4,361	2,767	7,128	335	307	132	307	252	252

Names of Operators



TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, .....	..	..	..	..	..	..	1	..	..	..	..	..	1	7.69
Falls of slate, .....	..	..	..	..	..	..	..	1	..	..	1	..	1	7.69
Falls of roof, .....	..	..	..	..	..	..	..	..	..	..	..	..	1	7.69
Mine cars, .....	..	..	1	..	..	..	..	..	..	..	..	..	1	7.69
Premature blasts, .....	1	..	..	..	..	1	..	..	..	..	..	2	4	30.78
Falling into shafts, .....	1	..	..	..	..	..	..	1	1	2	..	..	4	30.77
Miscellaneous, .....	..	..	..	..	..	1	..	..	..	..	..	..	1	7.69
Totals, .....	1	..	1	..	..	2	1	2	1	2	1	2	13	100.00
Causes of Accidents Outside														
Cars, .....	2	..	..	1	..	..	..	..	..	1	..	..	4	44.44
Machinery, .....	..	..	..	..	..	..	..	..	..	..	1	..	1	11.12
Miscellaneous, .....	..	2	1	..	..	..	..	..	1	..	..	..	4	44.44
Totals, .....	2	2	1	1	..	..	1	..	..	2	1	..	9	100.00
Grand totals inside and outside, .....	3	2	2	1	..	2	1	2	1	4	2	2	22	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Percentages	
	January	February	March	April	May	June	July	August	September	October	November	December		Totals
Causes of Accidents Inside														
Falls of coal, .....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	6.06
Falls of slate, .....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	4	12.12
Falls of roof, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	3.03
Mine cars, .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	4	12.12
Explosions of gas and dust, .....	5	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	11	33.34
Premature blasts, .....	1	.....	.....	.....	2	1	.....	1	.....	2	.....	.....	7	21.21
Falling into slopes, etc., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	3.03
By mules, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3.03
Miscellaneous, .....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	2	6.06
Totals, .....	6	2	.....	1	3	4	3	3	2	5	1	1	33	100.00
Causes of Accidents Outside														
Cars, .....	1	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	45.45
Machinery, .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	9.10
Miscellaneous, .....	2	.....	.....	1	.....	.....	1	.....	.....	.....	.....	1	6	45.45
Totals, .....	3	3	1	1	.....	.....	2	.....	.....	.....	.....	1	11	100.00
Grand totals inside and outside, .....	9	5	3	2	3	4	5	3	2	5	1	2	44	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												Totals
	January	February	March	April	May	June	July	August	September	October	November	December	
Inside													
Miners, .....	1						1	1		2	1		5
Miners' laborers, .....			1										2
Pumpmen, .....						2		1	1			2	5
All other employes, .....													
Totals, .....	1		1			2	1	2	1	2	1	2	13
Outside													
Slatepickers (boys), .....				1							1		1
All other employes, .....		2	1	1						2			3
Totals, .....	2	2	1	1						2	1		9
Grand totals inside and outside, .....	3	2	2	1		2	1	2	1	4	2	2	22

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	6	1	1	.....	2	2	2	3	2	4	.....	1	24
Miners' laborers, .....	.....	.....	.....	.....	1	1	.....	.....	.....	1	1	.....	4
Company men, .....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2
All other employes, .....	.....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	3
Totals, .....	6	2	2	1	3	4	3	3	2	5	1	1	33
Outside													
Blacksmiths and carpenters, .....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	1	3
Engineers and firemen, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
All other employes, .....	2	3	1	.....	.....	.....	1	.....	.....	.....	.....	.....	7
Totals, .....	3	3	1	1	.....	.....	2	.....	.....	.....	.....	1	11
Grand totals inside and outside, .....	9	5	3	2	3	4	5	3	2	5	1	2	44

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	3	1	1	...	...	1	...	1	1	1	1	1	11
English, .....	...	1	1	...	...	...	...	...	...	1	...	...	1
Hungarian, .....	...	...	...	1	...	...	...	...	...	...	...	...	2
Italian, .....	...	...	...	...	...	1	1	1	...	2	1	...	1
Slavonian, .....	...	...	...	...	...	...	...	...	...	...	...	1	6
Austrian, .....	...	...	...	...	...	...	...	...	...	...	1	1	1
Totals, .....	3	2	2	1	...	2	1	2	1	4	2	2	22

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	1	2	...	2	1	1	4	...	1	1	...	...	13
German, .....	...	1	...	...	2	2	...	...	...	...	...	1	1
Polish, .....	...	...	...	...	...	...	...	...	...	...	...	...	5
Hungarian, .....	1	1	1	...	...	...	1	1	...	...	...	...	2
Slavonian, .....	1	1	1	...	...	1	1	1	1	2	1	1	6
Lithuanian, .....	3	1	1	...	...	...	...	...	...	...	...	...	3
Austrian, .....	1	1	...	...	...	1	...	1	1	...	...	...	10
Russian, .....	2	1	1	...	...	...	...	1	...	...	...	...	1
Swedish, .....	...	...	...	...	...	...	...	...	...	1	...	...	1
Totals, .....	9	5	3	2	3	4	5	3	2	5	1	2	44

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents, number of persons employed inside, and quantity of air produced for each person per minute

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet	Width of blades in feet	Depth of blades in feet	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside	Average number of cubic feet per minute provided for each person
Philadelphia and Reading Coal and Iron Co.	Shaft, Shaft,.....	Gaseous, Gaseous,.....	Fan, Fan,.....	21 21	7 7	6 6	73 73	1.2 1.2	Gubal, Gubal, ..	Steam, Steam,....	19	155,805	96,825	155,860	252	385
Otto:																
Red Ash, .....	Slope,.....	Gaseous,.....	Fan,.....	21	7	6	84	2.3	Gubal, .....	Steam,.....	7	60,300	31,500	67,200	100	315
White Ash, .....	Slope,.....	Gaseous,.....	Fan,.....	15	5	3.5	80	1.25	Gubal, .....	Steam,.....	6	50,000	29,100	50,900	114	255
Mud, .....	Drift,.....	Non-gas,.....	Natural,.....	15	5	3.5	85	2	Gubal, .....	Steam,.....	13	79,780	78,200	81,540	27	...
Phoenix Park, .....	Slope,.....	Gaseous,.....	Fan,.....	15	5	3.5	85	2	Gubal, .....	Steam,.....	13	79,780	78,200	81,540	3.3	221
Glendower, .....	Shaft,.....	Gaseous,.....	Fan,.....	21	7	6	60	1	Gubal, .....	Steam,.....	10	103,456	79,457	112,119	186	437
Taylorville, .....	Slope,.....	Gaseous,.....	Fan,.....	12	4	3.6	60	1.1	Gubal, .....	Steam,.....	10	103,456	79,457	112,119	186	437
West Glendower, .....	Slope,.....	Gaseous,.....	Fan,.....	12	4	3.6	60	1.1	Gubal, .....	Steam,.....	10	103,456	79,457	112,119	186	437
Pine Knot, .....	Shaft,.....	Non-gas,.....	Natural,.....	12	4	3.6	60	1.1	Gubal, .....	Steam,.....	10	103,456	79,457	112,119	186	437
Thomaston, .....	Slope,.....	Gaseous,.....	Fan,.....	12	4	3.6	60	1.1	Gubal, .....	Steam,.....	10	103,456	79,457	112,119	186	437
Paynes, .....	Slope,.....	Gaseous,.....	Fan,.....	12	4	3.6	60	1.1	Gubal, .....	Steam,.....	10	103,456	79,457	112,119	186	437
John Veith No. 1, .....	Shaft,.....	Gaseous,.....	Fan,.....	15	5	4.6	45	3	Gubal, .....	Steam,.....	10	103,456	79,457	112,119	186	437
John Veith No. 2, .....	Shaft,.....	Gaseous,.....	Fan,.....	15	5	4.6	45	3	Gubal, .....	Steam,.....	10	103,456	79,457	112,119	186	437
St. Clair Coal Co.																
St. Clair, .....	Shaft,.....	Gaseous,.....	Fan,.....	14	5	3.6	70	1	Gubal, .....	Steam,.....	5	53,156	45,939	49,745	189	243
St. Clair, .....	Drift,.....	Non-gas,.....	Fan,.....	16	5	3.6	90	1	Gubal, .....	Steam,.....	5	62,110	50,570	76,440	223	227





TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Wadesville, .....						
Oxford, .....						
Pine Hill, .....						
Glendon, .....						
Pine Knot, .....	Schuylkill, .....	W. J. Richards, General Manager.	Pottsville, .....	Reese Tasker, .....	Pottsville, .....	Philadelphia and Reading
Thompson, .....						
John Veith, .....						
Anchor washery, .....						
St. Clair Coal Co.						
St. Clair Colliery, .....	Schuylkill, .....			W. T. Smyth, .....	Pottsville, .....	Philadelphia and Reading
St. Clair washery, .....						
Lytie, .....	Schuylkill, .....	R. A. Quin, .....	Wilkes-Barre, .....	Arthur Kennedy, .....	Minersville, .....	Pennsylvania
Buck Run Coal Co.	Schuylkill, .....			James B. Weale, .....	Minersville, .....	Philadelphia and Reading
Oak Hill Coal Co.	Schuylkill, .....	Chas. A. Schwenck, .....	Minersville, .....	Chas. A. Schwenck, .....	Minersville, .....	Philadelphia and Reading
Crystal Run Coal Co.	Schuylkill, .....	Lee J. Sandridge, .....	Frackville, .....	Lee J. Sandridge, .....	Frackville, .....	Philadelphia and Reading
Broad Mountain, .....	Schuylkill, .....			D. J. McGee, .....	Shamokin, .....	Philadelphia and Reading
Stoddart Coal Co.	Schuylkill, .....					
Wolf Creek washery, .....	Schuylkill, .....			W. B. Richards, .....	Minersville, .....	Pennsylvania
Pine Hill Coal Co.	Schuylkill, .....					
Pine Hill, .....						
Black Heath washery, .....	Schuylkill, .....	J. A. Davis, .....	St. Clair, .....			Philadelphia and Reading
Ellsworth, .....	Schuylkill, .....					
John H. Davis Co.						
Pottsville Coal Co.	Schuylkill, .....			W. A. Snyder, .....	Pottsville, .....	Philadelphia and Reading
Pottsville washery, .....						
Mt. Hope Coal Co.	Schuylkill, .....			I. D. Beahm, .....	St. Clair, .....	Philadelphia and Reading
Mt. Hope, .....						

E. White and Co. Howard, .....	Schuykill, .....	Richard White, ...	Pottsville, .....	Philadelphia and Reading
Darkwater Coal Co. Newcastle, .....	Schuykill, .....	James Tinley, .....	Tamaqua, .....	Pennsylvania
Butcher Creek Coal Co. Laurel Run, .....	Schuykill, .....	James J. Whims, ...	St. Clair, .....	Philadelphia and Reading
Cain Brothers Coal Co. Cain, .....	Schuykill, .....	Michael Cain, .....	Pottsville, .....	Philadelphia and Reading (in course of construction.)

TABLE 2.—Number of tons of coal mined, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of days worked	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.	Schuylkill,.....	227,811	28,901	2,603	259,320	202	558	.....	7	1,683	80,359	48
Wadesville, .....		184,301	15,706	1,718	201,719	247	846	2	.....	3,067	50,435	92
Otto, .....		137,093	25,899	1,997	164,989	248	695	.....	.....	218	47,835	72
Phoenix Park, .....		68,660	24,533	419	94,712	248	532	4	1	533	31,832	32
Glendover, .....		3,038	4,322	49	7,409	.....	302	.....	.....	64	23,116	24
Fine Knot, .....		.....	.....	.....	.....	.....	124	2	.....	.....	29,700	8
John Veith, .....	Schuylkill,.....	621,903	99,455	6,791	728,149	.....	3,157	8	8	5,565	263,278	276
Anchor washery, .....		54,074	4,000	.....	58,674	153	91	.....	.....	.....	9	.....
Totals, .....		675,977	104,055	6,791	786,823	.....	3,248	8	8	5,565	263,287	276
St. Clair, .....	Schuylkill,.....	351,212	76,030	5,573	432,815	244	810	4	5	11,117	17,100	63
St. Clair washery, .....		64,127	8,400	.....	72,527	148	26	.....	.....	.....	.....	.....
Totals, .....		415,339	84,430	5,573	505,342	.....	836	4	5	11,117	17,100	63
Lytle Coal Co., .....	Schuylkill,.....	285,368	62,598	7,447	355,413	249	802	1	9	684	115,367	90
Buck Run Coal Co., .....		190,893	18,250	555	209,698	249	448	2	1	773	73,695	41

\*No time given; breaker did not work.

Oak Hill, .....	Oak Hill Coal Co.	Schuykill, .....	83,472	21,000	3,021	107,493	192	415	.....	4	1,839	22,635	47
Broad Mountain, .....	Crystal Run Coal Co.	Schuykill, .....	44,920	6,900	655	51,575	228	218	1	4	270	11,025	17
Wolf Creek washery, .....	Stoddart Coal Co.	Schuykill, .....	43,327	2,206	.....	45,533	183	36	1	.....	.....	.....	2
Pine Hill, .....	Pine Hill Coal Co.	} Schuykill, .....	24,374	17,752	110	42,236	66	352	3	4	1,600	13,850	.....
Black Heath washery, .....			1,763	.....	4	1,772	182	18	.....	.....	.....	.....	.....
Totals, .....			26,112	17,752	114	44,008	.....	370	2	4	1,600	13,850	.....
Ellsworth, .....	John H. Davis Co.	Schuykill, .....	33,120	3,000	464	36,614	259	120	.....	.....	50	9,500	14
Pottsville washery, .....	Pottsville Coal Co.	Schuykill, .....	32,462	2,000	730	35,192	167	40	.....	.....	.....	.....	.....
Mt. Hope, .....	Mt. Hope Coal Co.	Schuykill, .....	24,083	4,800	3,567	32,450	113	205	1	8	120	4,080	12
Howard, .....	E. White and Co.	Schuykill, .....	26,332	5,000	145	31,477	130	121	.....	3	140	8,850	14
Newcastle, .....	Darkwater Coal Co.	Schuykill, .....	18,051	10,950	103	29,164	66	197	1	3	249	2,942	17
Laurel Run, .....	Butcher Creek Coal Co.	Schuykill, .....	11,943	3,000	114	15,057	142	41	.....	.....	60	800	5
Cain, .....	Cain Brothers Coal Co.	Schuykill, .....	1,369	960	96	2,425	116	31	.....	.....	53	1,479	2
Grand totals, .....			1,912,798	346,001	29,465	2,288,264	.....	7,128	22	44	22,520	544,610	600

TABLE 2.—Recapitulation

Names of Operators	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employees	Total production of coal in tons	Number of employees	Number of fatal accidents	Number of non-fatal accidents	Number of kegs of powder used	Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co., ..	Schuylkill.....	675,977	104,055	6,791	786,822	3,248	5	8	5,565	293,287	276
St. Clair Coal Co., .....		415,339	84,430	5,573	505,342	383	4	9	11,117	17,104	63
Lytle Coal Co., .....		285,368	62,595	7,447	355,415	802	1	9	684	115,397	90
Buck Run Coal Co., .....		190,893	18,250	555	209,698	448	2	1	773	13,635	41
Oak Hill Coal Co., .....		83,472	21,000	3,021	107,493	415	2	4	1,528	22,685	47
Crystal Run Coal Co., .....		44,950	6,000	655	51,535	218	1	4	270	11,025	17
Stoddard Coal Co., .....		43,327	2,206	.....	45,533	38	1	.....	.....	.....	2
Pine Hill Coal Co., .....		26,142	17,752	114	44,008	370	3	4	1,600	13,850	14
John H. Davis Co., .....		33,120	3,000	494	36,614	120	.....	.....	50	9,500	.....
Mottsville Coal Co., .....		32,462	2,000	730	25,192	40	.....	.....	.....	.....	.....
McTipec Coal Co., .....		24,083	4,800	3,567	32,450	205	1	5	120	4,080	12
E. White and Co., .....		26,332	5,000	145	31,477	121	.....	.....	140	8,830	14
Dark Horse Co., .....		18,051	10,950	163	29,164	197	1	3	249	2,942	17
Butcher Creek Coal Co., .....		11,943	3,000	114	15,057	41	.....	.....	60	800	5
Cain Brothers Coal Co., .....		1,369	950	96	2,425	31	.....	.....	53	1,479	2
Totals, .....		1,912,798	346,001	29,465	2,288,264	7,128	22	44	22,520	544,610	600



TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric						
Philadelphia and Reading Coal and Iron Co.,	Schuylkill	90	3,270	65	10,110	13,380	4	.....	.....	90	16,345	21	11,011	8,885	3
St. Clair Coal Co.,		9	450	18	2,700	3,150	6	.....	3	25	3,551	5	2,000	1,100	4
Lytle Coal Co.,		.....	.....	26	4,100	4,100	1	.....	.....	14	6,873	5	5,000	5,000	3
Buck Run Coal Co.,		.....	.....	8	1,500	1,500	1	.....	3	23	959	3	1,800	400	1
Oak Hill Coal Co.,		8	130	10	1,425	1,555	2	.....	.....	14	1,250	4	3,400	1,550	.....
Crystal Run Coal Co.,		.....	.....	8	920	920	1	.....	.....	19	1,000	2	780	400	.....
Stoddart Coal Co.,		4	425	4	425	425	.....	.....	.....	7	288	.....	.....	.....	.....
Pine Hill Coal Co.,		.....	.....	2	1,500	1,500	.....	.....	2	9	950	.....	4,000	800	.....
John H. Davis Co.,		.....	.....	7	340	340	.....	.....	.....	4	150	.....	600	2	.....
Pottsville Coal Co.,		.....	.....	2	700	700	.....	.....	.....	5	124	1	300	250	.....
Mt. Hope Coal Co.,		4	340	5	550	870	2	.....	.....	10	240	.....	.....	.....	.....
E. White and Co.,		.....	.....	4	575	575	.....	.....	.....	16	479	3	2,400	1,500	.....
Barewater Coal Co.,		2	70	6	1,000	1,070	1	.....	.....	10	730	1	150	20	.....
Butcher Creek Coal Co.,		.....	.....	3	240	240	.....	.....	.....	5	150	3	300	75	.....
Cain Brothers Coal Co.,		.....	.....	1	100	100	.....	.....	5	.....	250	1	.....	25	.....
Totals,	.....	113	4,230	169	26,185	30,415	18	.....	8	256	33,332	48	31,771	20,005	14

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employees	Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill,.....	1	...	8	150	68	31	...	...	67	113	488	...	2	7	21	32	25	3	120	220	658
		1	...	9	189	110	56	6	...	69	123	510	...	3	10	32	33	19	4	175	276	846
		1	...	6	186	69	44	5	4	67	120	502	...	1	1	32	48	...	3	112	133	691
		1	...	3	90	79	10	3	5	29	32	232	...	1	10	32	24	27	3	183	280	532
		1	...	2	9	45	3	...	...	32	43	135	...	2	10	32	...	...	2	158	167	392
		1	...	1	98	...	...	...	...	...	...	99	...	1	3	4	7	...	1	25	134	233
		...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	7	51	91
Totals, .....	...	28	625	469	144	14	15	264	431	1,986	...	11	51	158	144	71	17	800	1,952	3,248		
St. Clair Coal Co. St. Clair washery, .....	Schuylkill,.....	3	...	4	180	129	40	19	8	...	119	502	1	2	29	41	58	95	4	87	326	810
		3	...	4	180	129	40	19	8	...	119	502	1	1	...	...	6	1	...	14	26	26
Lytle, .. Buck Run Coal Co. Oak Hill Coal Co.	Schuylkill,.....	3	...	4	180	129	40	19	8	...	119	502	1	3	29	45	64	95	4	101	334	836
		1	2	10	264	44	42	9	13	105	106	586	1	1	15	19	50	23	6	91	206	892
		1	...	4	75	36	13	3	3	33	122	233	1	1	11	13	14	10	8	97	155	418
		1	...	6	114	67	26	4	5	35	12	270	1	1	8	24	33	2	4	72	145	415
		1	...	6	114	67	26	4	5	35	12	270	1	1	8	24	33	2	4	72	145	415

Crystal Run Coal Co.	Schuykill,.....	1	2	1	40	23	10	1	4	32	.....	114	1	1	6	10	10	4	1	71	104	218
Broad Mountain, .....																						
Stoddart Coal Co.	Schuykill,.....													1	1	1	5	2	1	1	24	36
Wolf Creek washery, .....																						
Pine Hill Coal Co.	} Schuykill,.....	1	2	3	95	50	24	2	4	8	22	211	1	1	5	14	36	23	2	59	141	352
Black Heath Washery, .....																						
Totals, .....		1	2	3	95	50	24	2	4	8	22	211	1	2	5	14	41	23	2	71	159	370
John H. Davis Co.	Schuykill,.....	1	1	1	12	15	3	.....	2	5	.....	41	1	1	2	6	16	2	1	50	79	130
Ellsworth, .....																						
Pottsville Coal Co.	Schuykill,.....													1	1	2	2	18	1	1	14	40
Pottsville washery, .....																						
Mt. Hope Coal Co.	Schuykill,.....	1	2	...	56	24	5	.....	.....	25	.....	113	1	1	5	18	16	.....	1	50	92	205
Mt. Hope, .....																						
E. White and Co.	Schuykill,.....	1	.....	.....	35	21	3	.....	2	2	6	71	1	1	2	8	14	1	1	22	50	121
Howard, .....																						
Dawkwater Coal Co.	Schuykill,.....	1	...	1	39	27	7	.....	.....	9	31	115	1	1	4	7	15	4	1	49	82	197
Newcastle, .....																						
Butcher Creek Coal Co.	Schuykill,.....	1	.....	...	10	10	1	.....	1	.....	...	23	1	1	3	5	4	.....	1	3	18	41
Laurel Run, .....																						
Cain Brothers Coal Co.	Schuykill,.....	1	.....	...	6	8	.....	.....	.....	1	.....	16	1	1	2	4	4	.....	.....	3	15	31
Cain, .....																						
Grand totals, .....		20	9	58	1,555	924	318	52	57	519	849	4,361	14	28	137	388	445	238	49	1,518	2,767	7,128

TABLE 3.—Recapitulation

Philadelphia and Reading Coal and Iron Co.	6	.....	28	625	469	144	14	15	254	431	1,996	.....	11	51	158	144	71	17	800	1,252	3,248
St. Clair Coal Co., .....	3	.....	4	180	126	46	19	8	.....	119	502	1	3	20	45	64	96	4	101	324	836
Lytle Coal Co., .....	1	2	10	201	44	42	5	13	105	102	396	1	1	13	50	32	36	6	91	206	802
Crystal Run Coal Co., .....	1	.....	6	114	65	23	4	5	33	122	225	1	1	11	13	14	10	8	97	155	448
Park Hill Coal Co., .....	1	.....	6	114	65	23	4	5	33	12	270	1	1	8	24	33	2	4	72	145	415
Crystal Run Coal Co., .....	1	2	1	40	23	10	1	4	32	.....	114	1	1	6	10	10	4	1	71	104	218
Miscellaneous companies, .....	7	5	5	254	156	43	2	9	50	59	590	9	10	26	69	130	32	9	286	571	1,161
Totals, .....	20	9	58	1,555	924	318	52	57	519	849	4,361	14	28	137	368	445	238	49	1,518	2,767	7,128

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Philadelphia and Reading Coal and Iron Co. Wadesville, .....	{ Schuylkill,.....	22	21	21	.....	10	21	16	20	14	20	19	18	202
Otto, .....		22	23	22	.....	14	26	20	28	19	26	24	23	247
Phoenix Park, .....		24	23	24	.....	14	26	19	26	19	26	24	23	248
Glensower, .....		24	23	25	.....	14	26	20	26	19	26	23	22	248
St. Clair, .....		24	21	24	.....	14	25	20	24	18	26	24	24	244
Lytle, .....	Schuylkill,.....	24	23	27	.....	10	22	24	26	22	25	23	23	249
Buck Run Coal Co. Oak Hill, ..		25	22	22	.....	17	25	19	26	19	26	25	23	249
Schuylkill,.....		22	23	22	.....	12	23	22	24	16	.....	9	19	192
Crystal Run Coal Co. Broad Mountain, .....		22	23	22	.....	10	21	19	15	23	25	25	23	228
Pine Hill, .....		.....	.....	.....	.....	.....	.....	.....	.....	10	16	19	21	66
Ellsworth, .....	Schuylkill,.....	25	24	27	.....	16	25	19	27	18	27	25	25	259
Mt. Hope, .....		25	24	26	.....	12	26	.....	.....	.....	.....	.....	.....	113
Howard, .....		24	20	8	.....	.....	.....	.....	.....	12	21	24	21	130
Newcastle, .....		22	21	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
Laurel Run, .....		25	22	18	.....	12	12	12	12	6	12	6	5	142
Cain, .....	Schuylkill,.....	.....	.....	.....	.....	.....	.....	13	24	14	24	22	19	116

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Are	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 19	Andrew Camplon, .....	American,...	Laborer, ...	18	S.	...	...	Glendower, .....	Schuy/kill,.....	Killed by being squeezed between car and locomotive. Outside.
25	William Marron, .....	American,...	Car-runner, ...	24	S.	...	...	St. Clair, .....	Schuy/kill,.....	Fatally injured by being thrown from mine car. He was being pushed by locomotive. The car became derailed and he was thrown from it and had his spine fractured. Died at Pottsville Hospital, February 24. Outside.
26	Frank Hefner, .....	American,...	Miner, .....	45	M.	1	7	Otto, .....	Schuy/kill,.....	Fatally injured by blast. Died on way to hospital. He went into the second pillar heading in breast to arrange cart-ridge for blast. This heading was driven partly through the pillar. While sitting in the heading the miners in the adjoining breast inside exploded a blast that pierced the heading in which he was sitting, the pieces of coal from which struck him and knocked him down the breast roadway.
Feb. 6	Peter Maurer, .....	American,...	Timber-cut-ter.	46	M	1	...	Glendower, .....	Schuy/kill,.....	Fatally injured. Died at Pottsville Hospital, February 23. He was standing on a plank elevated from the ground, chopping an upright that was supporting nine timber on ear. The stick he was chopping gave way and in attempting to get out of the way of the falling timber he fell and broke his back. He was assisting to remove timber that was being unloaded from railroad truck, and was about to remove a stick that was close to the wheels, when the men on the truck rolled a stick off it, one end of which struck him on the head and killed him. Outside.
13	John Pellock, .....	Hungarian,...	Laborer, ...	28	S.	...	...	Lytle, .....	Schuy/kill,.....	



TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
March 2	Edward Brown, .....	American,...	Laborer, ...	23	S. ....	.....	.....	Broad Mountain, ..	Schuylkill, .....	Killed by mine car. A mine car became derailed at bottom of slope No. 1 lift, No. 3 slope. He and his partner placed the spreader chain of the hoisting rope on side hook of the car, and gave the engineer the signal to hoist. When the engine moved it swung the car to one side and Brown was caught between car and slope timber.
24	John Boyshock, .....	Hungarian,...	Miner, .....	29	S. ....	.....	.....	Mt. Hope, .....	Schuylkill, .....	Killed. In going home from his work he walked on locomotive track. He had to pass an engine house, the engine of which was hoisting. The steam prevented him from seeing the approaching locomotive, which struck and killed him. Outside.
April 4	Tomaso Tesoro, .....	Italian, .....	Laborer, ...	37	M. 1	.....	.....	St. Clair, .....	Schuylkill, .....	Killed by being squeezed between bumpers of cars on stripping. Outside.
June 6	Mike Kedora, .....	Slavonian,...	Machine-runner, ..	24	M. 1	.....	1	John Veith, .....	Schuylkill, .....	Skull fractured by scaffold plank striking him. One other man were driving a tunnel. They had exploded two rounds of holes before going home. Donnelly and William Dempsey (who was also injured) went back into the tunnel to attach the wires to the remaining holes, and while doing so William Burns, who had charge of the electric battery, through some misunderstanding, pulled the lever and exploded the holes, killing Donnelly and injuring Dempsey.
25	Charles Donnelly, .....	American,...	Machine-runner, ..	28	S. ....	.....	.....	Buck Run, .....	Schuylkill, .....	Leg fractured. Died July 31. He was prying down a piece of coal at the face of breast and it fell on him.
July 28	Charles Kampo, .....	Slavonian,...	Laborer, ...	23	S. ....	.....	.....	St. Clair, .....	Schuylkill, .....	

Aug.	25	Steve Overlight, .....	Slavonian,...	Machine run- ner.	32	S. ...	John Veith, .....	Schuykill, .....	Killed by falling down shaft. He was assisting to place a pump in No. 1 shaft. While climbing the outside of timber to another his hold slipped and he fell to the bottom of shaft, a distance of 185 feet.
	27	Emanuel Hossler, ...	American,...	Miner, .....	35	M 1	Otto, .....	Schuykill, .....	Killed by fall of rock while trimming loose pieces at face of breast.
Sept.	9	George Schoffstall, ..	American,...	Pump engi- neer.	43	M 1	Pine Hill, .....	Schuykill, .....	While he was being hoisted on cage in shaft the throttle valve burst, which caused the engineer to lose control of the engine. The cage was pulled up to the sheave wheel and turned partly over, and Schoffstall was thrown down the shaft.
	10	John Warner, .....	American,...	Miner, .....	31	M 1	Pine Hill, .....	Schuykill, .....	Killed by being thrown down shaft. The shaft bucket had been hanging in the shaft above the No. 2 level. When these two men arrived at the bottom or No. 3 level they signalled the engineer to lower the bucket. When it came to the level of the bucket, the signal to hoist. While hoisting, the bucket (which had caught fast) broke loose and struck the socket of the rope with such force as to split it for a distance of two inches, which allowed the rope to slip through and the men and bucket were thrown to the bottom of the shaft.
Oct.	10	Henry Eva, .....	English,....	Miner, .....	32	M 1			
	13	Peter Rooslin, .....	Slavonian,...	Laborer, ...	22	M 1	Newcastle, .....	Schuykill, .....	Killed on stripping outside. While shovelling clay in rear in front of steam pump against the car.
	31	Michael Senko, .....	Slavonian,...	Driver, ....	18	S. ....	Buck Run, .....	Schuykill, .....	Fallen squeezed between two dumpers. Died same day. He was coming in on rock dumper. Instead of waiting until the driver, who was beneath the breaker, passed out beyond the switch. He kept on going despite the warning of the foreman, who chanced to be present at the time. He remained on the front of the dumper until both dumpers came close together, when in endeavoring to get off he was caught. Outside.
Nov.	7	George Unafare, .....	American,...	Slate picker,	14	S. ....	Wolf Creek wash- ery.	Schuykill, .....	Killed by being caught in elevator line. The breaker had been stopped for several minutes and he went down in slate chute to start some rock that was blocked in it. While in the chute the breaker commenced operation and while returning to his place of work he was caught in the elevator line. Outside.

TABLE 4.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Nov. 30	Joseph Bell, .....	Slavonian...	Miner, .....	38	M	1	5	St. Clair, .....	Schuykill,.....	Killed by fall of slate. He was shoveling coal at face of breast. A piece of slate fell, discharging the prop that was supporting it and the slate caught fire.
Dec. 3	Baptiste Marcadia, ...	Austrian, ....	Machine runner.	37	S.	....	....	Glendower, .....	Schuykill,.....	These two men were working in the tunnel. They had a round of seventeen holes drilled, thirteen of which were charged. The chargeman was in the act of charging the fourteenth hole when it exploded, killing Marcadia and injuring Dolan so badly that he died the same evening.
8	Thomas Dolan, .....	American...	Machine runner.	29	S.	....	....			

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	Peter Crundok, .....	Lithuanian, ..	Miner, .....	28	S.	St. Clair, .....	Schuylkill, .....	Hands and face burned by gas. He ignited blast and retired to gangway to secure brattice boards. He then returned to face with boards and while hunting an ax near face he ignited the gas which was liberated by blast. Head and breast injured. While dumping a car of coal on breaker tip he failed to get the door latch open. The car went down in the dump chute and struck something hot, breaking it, pieces of which struck him. Outside of safety he failed to return to place a piece of coal from the blast struck him.
5	Andrew Harvester, ....	Hungarian, ..	Laborer, .....	30	S.	Broad Mountain, ..	Schuylkill, .....	Face and hands burned by gas. He supposed to work with safety lamp. He ignited the gas with naked light. After the accident the top of his lamp was found in heading, covered with canvas. Was returning a gondola car under breaker. He slipped and fell and the car passed over his head. Outside. Leg fractured. The night watchman started the locomotive from the engine room and did not notice Koons. In passing out it caught him between the engine and door frame. Outside. Face and hands burned by gas. He was working in chute. He unscrewed the top of his safety lamp to ignite his pipe and ignited the gas.
10	John Alexas, .....	Lithuanian, ..	Miner, .....	44	M.	Pine Hill, .....	Schuylkill, .....	Face and hands burned by gas. They ignited fuse attached to blast before they knew the place to be clear of gas and the fire from fuse ignited the gas.
12	Martin Miller, .....	Russian, .....	Miner, .....	35	M.	Lytle, .....	Schuylkill, .....	
15	Andrew Sprock, .....	Slavonian, ..	Car-loader, .....	32	M.	St. Clair, .....	Schuylkill, .....	
18	Phillip Koons, .....	American, ..	Engineer, .....	67	M.	Glendower, .....	Schuylkill, .....	
23	John Tarinsky, .....	Lithuanian, ..	Miner, .....	41	M.	Lytle, .....	Schuylkill, .....	
23	Andrew Lucas, .....	Austrian, .....	Miner, .....	31	M.	Lytle, .....	Schuylkill, .....	
23	Jacob Olschock, .....	Russian, .....	Miner, .....	57	M.			

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Feb. 16	Edward Durkin, .....	American,...	Laborer, .....	19	S.	Oak Hill, .....	Schuykill, .....	Leg injured. He was struck by mine car while spragging another car. Outside.
17	Nicholas Metushen, ....	Slavonian,...	Driver, .....	19	S.	Newcastle, .....	Schuykill, .....	Leg injured. While running a dumper from the track, he stepped on the wheels of the dumper passed over his legs. Outside.
17	Paul Popolavage, .....	Russian,....	Miner, .....	22	S.	Howard, .....	Schuykill, .....	Leg fractured. While prying a piece of coal at face of breast it fell on him.
19	Joseph Gunbar, .....	American,...	Locomotive patch- or.	17	S.	Mt. Hope, .....	Schuykill, .....	Arm crushed. In attempting to jump on car that was pushed by locomotive he fell beneath the wheels. Outside.
21	Charles Srockman, ...	Polish,.....	Loader, .....	21	S.	St. Clair, .....	Schuykill, .....	Arm fractured. While riding on mine car his arm was caught between chute and car.
Ma ch 6	Wakam Berenshok, ...	Russian,....	Laborer, .....	45	M.	Newcastle, .....	Schuykill, .....	Leg bruised. He was cleaning track when a car running from the top of slope struck him. Outside.
12	James Godalesky, ....	Lithuanian,...	Miner, .....	31	S.	Lytle, .....	Schuykill, .....	Foot injured. While prying a piece of top slate it fell on him.
29	John Chingerte, .....	Slavonian,...	Patcher, .....	17	S.	St. Clair, .....	Schuykill, .....	Leg fractured. He sat on the breast platform, waiting for trip to come, with his back hanging over the end of platform. When the trip arrived he tried to remove his foot and the car squeezed it against the platform.
April 2	Joseph Mitchell, .....	American,...	Machinist, .....	27	S.	Oak Hill, .....	Schuykill, .....	Leg fractured. While assisting to remove steam line from pump slope a prop slipped away from one of his companions and struck him.
18	Robert Johnston, .....	American,...	Carpenter, .....	28	M.	Pine Hill, .....	Schuykill, .....	Hip injured. While stepping from one beam to another in breaker, he missed his footing and fell to the ground. Outside.
May 15	John Jones, .....	American,...	Miner, .....	37	M.	Pine Hill, .....	Schuykill, .....	Leg injured. While loading a mine car a piece of coal rolled on chute board and struck him.



May	18	Peter Kodock,	Polish,	Miner,	35	} Broad Mountain, ..	Schuykill, .....	(Head cut and bruised. Kodock ignited two blasts and a miner 150 feet from him ignited one at the same time. Kodock hearing the report from two blasts thought that it came from his blasts. When he arrived at face of blast the second blast exploded and injured him. He squeezed between mine car and timber.
	18	Medro Kamminis, .....	Polish,	Laborer, .....	38			
June	11	Anthony Lepski, .....	Lithuanian,	Miner, .....	54	Mt. Hope, .....	Schuykill, .....	Side injured by flying pieces of rock in tunnel from blast.
	25	William Dempsey, .....	American,	Machine runner, .....	24	Buck Run, .....	Schuykill, .....	Hands and face burned by gas. These men were driving chute. Pillus was smoking his pipe and ignited the gas.
July	28	Anthony Pillus, .....	Polish,	Miner, .....	29	} Wadesville, .....	Schuykill, .....	Ribs fractured. While tightening bolt with wrench in breaker the wrench slipped and he fell to the ground. Outside.
	9	Henry Washburn, .....	American,	Carpenter, .....	64	Pine Hill, .....		Back injured by kick from a mule. Pelvis bone injured by fall of slate at face of breast.
Aug.	11	Thomas Brennan, .....	American,	Loader-boss, .....	46	Wadesville, .....	Schuykill, .....	Arm fractured. He went under the breaker to start slate and when returning he took a short cut and his coat caught in jig shaft. Outside.
	21	Mike Federnko, .....	Slavonian,	Miner, .....	38	Oak Hill, .....	Schuykill, .....	Leg fractured by fall of coal.
Aug.	23	Charles Gable, .....	American,	Miner, .....	35	} Oak Hill, .....	Schuykill, .....	Face burned and bruised. He exploded a blast which contained three sticks of dynamite. It failed to do the work required so he cleaned out the hole and placed another stick in, which exploded while he was working at the hole.
	17	Michael Kahode, .....	Hungarian,	Miner, .....	39	Broad Mountain, ..		Hands and face burned by gas while driving heading.
Sept.	28	Charles Petrosky, .....	Lithuanian,	Miner, .....	25	Lytle, .....	Schuykill, .....	Hands and face burned by gas. He struck a match and ignited the gas.
	28	Stiney Lottoris, .....	Russian,	Miner, .....	39	Howard, .....	Schuykill, .....	Head and face cut by fall of slate at bottom of new slope.
Oct.	7	James Kondler, .....	American,	Miner, .....	19	Lytle, .....	Schuykill, .....	Back injured by fall of slate at the face of breast.
	17	Andrew Ferrann, .....	Lithuanian,	Miner, .....	24	Lytle, .....	Schuykill, .....	Face and hands burned by gas. In attempting to ignite fuse with match he ignited and exploded the gas.
Oct.	6	Adam Gelineski, .....	Lithuanian,	Miner, .....	38	Wadesville, .....	Schuykill, .....	Leg fractured. While loading a car in the gateway a piece of rock fell on him.
	13	Andrew Cochello, .....	Slavonian,	Laborer, .....	36	Howard, .....	Schuykill, .....	Spine injured. He was walking up new slope, aiding himself by pulling on rope that was used to lower timber. The rope slipped from its fastening and Carter fell down the slope.
Oct.	16	Alfred Carter, .....	American,	Miner, .....	49	Newcastle, .....	Schuykill, .....	Leg fractured by piece of coal from blast.
	20	John Axell, .....	Swedish,	Miner, .....	42	St. Clair, .....	Schuykill, .....	

TABLE 5.—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Oct. 26	William Degutis, ..... <sup>2</sup>	Lithuanian..	Miner, .....	27	S.	Lytle, .....	Schuylkill.....	Face and hands injured by blast in breast.
Nov. 27	John Kravits, .....	Lithuanian..	Laborer, .....	26	S.	Wadesville, .....	Schuylkill.....	Rib fractured. In getting out of mine car while it was ascending plane he was caught between car and timber.
Dec. 6	George Schupp, .....	German,.....	Carpenter, .....	35	S.	Mt. Hope, .....	Schuylkill.....	Back injured by falling from new breaker. Outside.
29	Simon Rewak, .....	Slavonian...	Miner, .....	27	S.	Wadesville, .....	Schuylkill.....	Face and hands burned by gas. The cup of his safety lamp worked loose at face of chute and the flame having been exposed ignited the gas.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

July 28, St. Clair Colliery, Charles Kampo, Slavonian, laborer, was endeavoring to pry down a piece of coal at the face of breast, when it fell on him, fracturing his leg. He died July 31.

August 27, Otto Colliery, White Ash slope, Emanuel Hossler, American, miner, was trimming loose pieces down at face of breast, when a piece of rock fell from the top and killed him.

November 30, St. Clair Colliery, Joseph Bell, Slavonian, miner, was killed while shoveling coal in chute at face of breast. A piece of slate broke over a prop that was securing it and dislodging the prop, the slate fell on him.

## Mine Cars

January 19, Glendower Colliery, Andrew Campion, American, laborer, was on his way to work at West Glendower, on afternoon shift. The locomotive used for hauling from this slope was on its way out with an empty car, and he jumped on it. On the way out the second car from the engine became derailed, and this caused the car next to the engine also to become derailed, one end of which partly mounted the engine, and caught Campion and pinned him against the engine front. Outside.

January 25, St. Clair Colliery, William Marron, American, car runner, was fatally injured. He was riding on mine car that was being pushed by locomotive. The car became derailed and he was thrown from it with such force that his spine was fractured. Died February 4 at Pottsville Hospital. Outside.

March 2, Broad Mountain Colliery, Edward Brown, American, laborer, was assisting to place a loaded mine car on the track at the bottom of No. 3 slope, No. 1 lift. The spreader chain attached to the hoisting rope was placed on one side hook in order to pull the car nearer to the track. The engineer moved the car and it swung to one side, catching Brown between the car and the side of the slope, killing him.

April 4, St. Clair Colliery, Tomasco Tesoro, Italian, laborer, was squeezed between cars. There was a car off the track on stripping, and the locomotive was pushing another car to it to pull it on the track. Tesoro was standing at the end of the car that was derailed, waiting for the cars to come close enough together so that he could couple them. The car that was off the track was in such a position that the bumpers of the cars passed each other, and Tesoro was caught and squeezed. Outside.

October 31, Buck Run Colliery, Michael Semko, Slavonian, driver on rock bank, was coming in from bank with the empty dumper. He passed the frog, where he should have waited until the driver, who was under the breaker, had passed that point, and kept on until he met the other driver coming toward him. He remained on the front of the dumper until both dumpers met, and was squeezed so badly that he died the same day. Outside.

### Premature Blasts

January 26, Otto Colliery, Frank Heffner, American, miner, was fatally injured by a blast. He died on his way to the Hospital. He worked in a breast, and was in the act of preparing some powder in the second pillar heading for a blast. While sitting in the heading the man in the adjoining breast inside exploded a blast, which penetrated the heading at the face. The force of the blast is supposed to have thrown Heffner down the breast manway, a distance of 120 feet.

June 25, Buck Run Colliery, Charles Donnelly, American, machine runner, with others, was driving a tunnel in lower lift. They had exploded two rounds of holes. Before going home Donnelly and Dempsey went back in tunnel to attach wires to explode the last round, and while doing so William Burns, who had charge of the electric battery, through some misunderstanding pulled the lever and exploded the third round of holes, killing Donnelly and injuring Dempsey.

December 3, Glendower Colliery, Baptiste Marcadia, Austrian, and Thomas Dolan, American, machine runners, were working in a tunnel at the bottom of Taylorsville, Buck Mountain slope. They had a round of 17 holes drilled, 13 of which were charged. The chargeman was in the act of charging the fourteenth hole, when it exploded, killing Marcadia and injuring Dolan so badly that he died the same evening.

It appears by the testimony of Dominick Sandri, the chargeman, that he had five sticks of dynamite in the hole, and in putting in the sixth and last stick he threw it. In an instant there was an explosion. There was a box containing 25 pounds of dynamite about 8 feet back from the face of the tunnel, and 13 sticks standing against the face on the bed of tunnel, which fortunately did not explode.

### Falling into Shafts, Slopes, Etc.

June 6, John Veith shaft, Michael Kedora, Slavonian, machine runner, was working at sinking John Veith shaft. After they had finished a set of timber in shaft they gathered the scaffold planks together and fastened chain to them to hoist them to surface. While the planks were being hoisted to the surface the chain slipped and the plank fell a distance of 38 feet. One of them struck Kedora on the head and fractured his skull.

August 25, John Veith Colliery, No. 1 shaft, Steve Overight, Slavonian, machine runner, was helping to place a pump in No. 1 shaft, and in climbing from one set of timber to another his hold slipped and he fell to the bottom of the shaft, a distance of 185 feet, and was killed.

September 9, Pine Hill Colliery, George Schoffstall, American, pump engineer, was killed by being thrown down shaft. While being hoisted to the surface the throttle valve of the engine burst, which caused the engineer to lose control of his engine. The cage was pulled up to the sheave wheel and tilted, and Schoffstall was thrown down the shaft and killed.



October 10, Pine Hill Colliery, John Warner, American, and Henry Eva, English, miners, were killed by being thrown down shaft. After quitting work for the day they went to the bottom of the shaft and signaled the engineer to lower the bucket, which had been suspended in the shaft above the No. 2 level. When the bucket arrived they jumped in it and gave the signal to be hoisted. While the bucket was ascending the billy (a device used to steady the bucket when ascending and descending the shaft) descended the shaft with terrific force and struck the socket of the hoisting rope, forcing the rope through it and splitting it a distance of two inches, and precipitating the men and bucket to the bottom of the shaft. The billy stuck fast in the shaft and did not descend with the bucket. When the bucket was ascending the vibration of the rope moved it from its fastenings.

### Machinery

November 7, Wolf Creek Washery, George Unafare, American, slate picker, went down in slate chute to start some rock that was blocked in it. The breaker had been stopped for several minutes, but commenced operations while he was in the chute. When returning to his place of work he was caught in the elevator line and killed. There was a boy employed to watch the scraper line outside and to start the chute when it would block. He could do this without going into the chute.

### Miscellaneous

February 6, Glendower Colliery, Peter Maurer, American, timber cutter, was chopping one of the supports which sustain the main timber on the truck, and in order to do this he was standing on a plank that was elevated from the ground. The supports gave way, and in attempting to get out of the way of the falling timber he slipped from the plank and a piece of timber struck him on the foot. He died from his injury at Pottsville Hospital, February 23.

February 13, Lytle Colliery, John Perlock, Hungarian, laborer, was assisting to unload truck of mine timber. He was standing alongside of the truck, about to move a stick of timber that was close to the truck wheels, when a stick was rolled from the truck and struck him on the head and killed him.

March 24, Mt. Hope Colliery, John Boyshock, Hungarian, miner, in going home from work walked on the locomotive track, and in doing this he had to pass an engine house, the engine of which was hoisting. The steam prevented him from seeing the approaching locomotive, and the engine struck him. He fell on the track and was rolled under the engine and killed. Outside.

October 13, Newcastle Colliery, Peter Boosin, Slavonian, laborer, employed in the stripping, was shoveling clay into a car in front of steam shovel, when a rush of clay from north end of stripping caught him against the car and killed him.



## CONDITION OF COLLIERIES AND IMPROVEMENTS

## PHILADELPHIA AND READING COAL AND IRON COMPANY

Otto Colliery, West Slope, Sixth Level.—Tunnel is being driven from bottom split of Mammoth to Buck Mountain, a distance of 188 feet.

Air tunnel is being driven from Holmes vein to top split of Mammoth.

Fifth Level.—An air tunnel from Holmes vein to top split of Mammoth. Has been driven distance of 45 feet. Not completed.

New lift has been sunk on the Primrose slope for the purpose of opening and developing the seventh level of the west slope, Holmes vein.

The air slope reported in last year's report is completed and a new 21-foot Guibal fan has been installed. Have dispensed with the 18-foot fan and 12-foot fan.

White Ash Slope—Lower level, tunnel has been driven from Skidmore to Buck Mountain, a distance of 188 feet. Not completed.

Water Level, tunnel has been driven distance of 19 feet, from Skidmore to Buck Mountain vein. Not completed.

New slope is being sunk on Holmes vein, now known as No. 3 slope.

Water Level, drift is being opened on Holmes vein.

About one-half mile south of the colliery, new four compartment is being sunk, and is now down 154 feet.

Condition of colliery is good.

Phoenix Park Colliery, Fifth Level.—Tunnel is driven 543 feet to reach Peach Mountain vein. Estimated distance, 810 feet.

No. 6 Level.—Air tunnel is driven from Diamond to Tracy vein on angle of 40 degrees, distance of 250 feet. Estimated distance to Tracy vein, 410 feet. Not completed.

The water is being pumped from Phoenix No. 1, Tracy slope.

New lift is being sunk on North basin, subterranean slope, No. 5 level.

New pump house is being driven in the rock, near bottom of slope on sixth level.

Bore hole 770 feet long from the surface has been drilled to sixth lift for steam 10 inches in diamter. It has been cased to 6 inches on account of caving. There is a 4-inch air line running through this hole, from which power is supplied to run pump and air drills where necessary.

Twelve-inch hole is now being drilled, and is down 584 feet.

Condition of colliery is good.

Pine Knot Colliery.—Tunnel 414 feet has been driven on east side of shaft, from Lelar vein, south dip.

Drill room on west side of tunnel, near the face, has been made in the rock. The purpose of this room is to locate the bore hole to tap the water in Mine Hill Gap workings. Air tunnel is being driven 50 feet vertical.

Payne's water level drift has been reopened.

Tunnel has been driven from the Jugular vein, Jugular basin, to Buck Mountain vein, a distance of 258 feet.

At Thomaston Colliery, the Crosby slope has been reopened to the first level, from where a tunnel is to be driven 1,000 feet, across the basin to Primrose vein, south dip.

The water has been pumped from the Lelar slope, distance of 325 feet.

Air slope 128 feet deep has been sunk to level of heading from Lelar slope, which is now connected.

The Buck Mountain west gangway is being worked in Thomaston water level to connect with plane gangway from Thomaston workings.

Condition of colliery is good.

Glendower Colliery.—Lower level of Glendower slope tunnel has been driven from Skidmore to Buck Mountain on south dip, distance 174 feet.

Tailorsville slope, Buck Mountain, south dip, tunnel is being driven to Daniel, on north dip, from Buck Mountain, lower level. It is in 451 feet. Air tunnel is driven 135 feet.

Wadesville Colliery.—Holmes vein plane is being extended.

A tunnel has been driven from Holmes to Little Orchard No. 2 lift, on Holmes plane.

Skidmore plane is being extended. Tunnel has been driven on this plane, No. 1 lift, from Skidmore to top lift of Mammoth.

Condition of colliery is good.

John Veith Colliery.—No. 2 shaft is down 955 feet, and is stopped for the present on the level with the sixth or lower level of Phoenix Park Colliery.

No. 1 shaft is down 1,200 feet, just past Primrose vein.

Condition of colliery is good.

#### LYTLE COAL COMPANY

Lytle Colliery.—A tunnel has been driven from the White Ash, fifth level, to the Primrose, cutting the Four Foot and Holmes veins, a distance of 245 feet.

A tunnel has been driven from the Skidmore vein to the middle split of the Mammoth vein, cutting the Black Heath west side fifth level.

Fifth level, a tunnel has been driven from the Black Heath to the Skidmore east side, a distance of 50 feet.

A tunnel is being driven from the Black Heath vein to the White Ash vein, east side, total distance of 220 feet. 125 feet of this tunnel is now completed.

No. 2 slope, on the Primrose vein, has been extended from the fourth to the fifth level, distance of 285 feet, on a pitch of 59 degrees.

Condition of colliery is good, except drainage in West Primrose, No. 5 lift, which is bad.

#### OAK HILL COAL COMPANY

Oak Hill Colliery.—A tunnel has been driven from the Seven Foot vein to Buck Mountain vein, one lift above water level, a distance of 116 feet.

A tunnel has been driven in North basin, fourth level, from Skidmore to Buck Mountain vein, distance of 237 feet.

The water has been tapped from the old workings of Charles Hill Colliery. First hole which was drilled from the gangway is 81 feet

6 inches from top of slate of Skidmore gangway to Black Heath vein, where the water was struck.

The length of holes Nos. 2 to 15, inclusive, run from 22 to 25 in length. They are bored from different angles, and are bored from the face of the tunnel, which was driven up from the gangway a distance of 53 feet. The pressure on No. 1 hole, in East Skidmore gangway, third level, was 155 pounds to the square inch, May 11, 1906. On May 19 the valves were opened and they commenced draining the water. Present pressure, 99 pounds to square inch.

Outside.—An additional breaker has been built to handle the fine sizes of coal, egg and smaller. The high part of the old breaker has been torn down and rebuilt, thus renewing its strength.

Condition of colliery fair, except the drainage in West White Ash, West Skidmore, No. 5 level and West Skidmore water level, which is bad.

#### PINE HILL COAL COMPANY

Pine Hill Colliery.—The new breaker started operations on September 15, after being idle since August 24, 1905, on account of the old breaker being burned.

The new breaker is concrete up to the floor line, and from there up it is yellow pine and oak. The breaker engine house is made of concrete blocks, which were made at the colliery.

The breaker engine house contains the following:

The old breaker engines, which were remodeled, and the old dynamo engine and dynamo, which is a direct connection, and a new direct connected dynamo and engine. The old dynamo is good for 672 amperes, and the new one is good for 892 amperes.

The new shop built is a combination carpenter, blacksmith and machine shop. The machine shop contains the following:

One small lathe, one large lathe, one large drill press, one pipe machine cuts to 10 inches, one bolt cutter.

The carpenter shop contains one band saw and one large grindstone. The new boiler house is built of brick, with concrete roof, and is 62 feet by 32 feet. It contains two new Maxim boilers, 750 horse-power each. A third new Maxim is now being installed, which is also 750 horse-power. The total horse-power when completed will be 2250.

Inside.—A tunnel was driven in the drift from the West Buck Counter level to the billy. The length is 295 feet.

Two pump houses in No. 3 level shaft, 11 feet high, 22 feet wide, are being driven. Will have two Scranton duplex pumps, 40 by 42 feet by 14 by 36 inches. When completed pump house sides and top will be made of reinforced concrete.

A tunnel was driven in No. 2 level in the shaft, from the East Seven Foot gangway to the Billy, Black Heath and Red Ash. The last two veins are worked out. This tunnel is 174 feet.

A tunnel in the shaft, No. 3 level, from the Billy to the Black Heath and Red Ash. This tunnel is 110 feet. A 16-foot fan is being erected at the top of the shaft. The shaft was concreted all around from the rock to the surface, a distance of 48 feet. Condition of colliery good.

## MOUNT HOPE COAL COMPANY

Mount Hope Colliery.—A new breaker with two sets of shakers, two new spiral separators, two sets of small rolls and two new jigs, the balance of the breaker consisting of old machinery rebuilt and replaced. Capacity 400 tons.

One tubular boiler 150 horse-power. This will permit them to abandon a nest of cylinder boilers. A new steam line to breaker and blacksmith shop.

A new slope has been sunk on the Mammoth vein a distance of 100 feet and turnouts turned at the bottom.

Fan removed from No. 3 slope to the new or No. 5 slope, and placed in position.

Condition of colliery is fair.

## JOHN H. DAVIS COMPANY

Ellsworth Colliery.—Condition of colliery is good, except drainage in North dip slope, which is bad. New breaker, 400-ton capacity, is in course of erection.

## CRYSTAL RUN COAL COMPANY

Broad Mountain Colliery.—Condition of this colliery is fair.

## BUTCHER CREEK COAL COMPANY

Laurel Run Colliery.—Condition of this colliery is good.

## BUCK RUN COAL COMPANY

Buck Run Colliery.—A ventilating fan has been erected for the Buck Mountain vein.

An electric haulage plant has been established. This plant consists of one 110 K. W., 250-volt general electric generator, driven by a McEwen engine, and three 8-ton locomotives.

A tunnel has been finished from the Crosby vein, North dip, to the Daniels vein, on the same dip.

A slope has been sunk to the third level on the Daniels vein.

A water level tunnel has been started, which will cut the Daniels and Skidmore veins on the North dip.

Condition of colliery is fair.

## DARKWATER COAL COMPANY

Newcastle Colliery.—Two 300 horse-power Maxim boilers, with boiler house and necessary ash conveyor, have been added to the boiler plant.

New blacksmith and car repair shop have been erected.

A double-track tunnel has been driven from an elevation at the head of the breaker back to the double-track slope sunk last year in the Skidmore vein, Main basin.

An additional slope for hoisting rock, and pumpway 650 feet deep, has been sunk 200 feet east of the main hoisting slope in the Skidmore vein, and a pair of 16x32 hoisting engines erected; also a pair of 22x48 inch geared engines erected on the main slope.



A tunnel 280 feet long has been driven 300 feet west from foot of the slope back to the Buck Mountain vein, and another tunnel has been driven in 50 feet south towards the Mammoth vein, east of slope 300 feet, for the purpose of tapping the Replier water.

A rock pump house has been completed, and two Jeanesville pumps, one of them 24x12x36 and the other 16x32x10x18, have been erected.

A 24-foot exhaust fan has been ordered.

In the Back basin a tunnel 200 feet long has been driven from the Buck Mountain back to the Scott Steel, and another tunnel about 100 feet long has been driven from the South to the North dip measures in the Juglar vein.

Two steam shovels have been in operation stripping the Mammoth vein in the Main basin.

Condition of colliery is fair.

#### CAIN BROTHERS COAL COMPANY

Cain Colliery—New breaker of 400 ton capacity has been erected. Single track slope has been sunk one lift on the Skidmore vein.

Tunnel has been driven seven feet from this level. Railroad track of standard gauge is being constructed from the Reading track at Pine Knot Colliery to the breaker.

Condition of colliery is good.

Howard Colliery.—Condition of colliery is good.

#### Mine Foremen's Examinations

The annual examination for mine foremen and assistant mine foremen was held at the Court House, Pottsville, April 24 and 25, 1906. The board consisted of Michael J. Brennan, Inspector, Pottsville; John Maguire, Superintendent, Pottsville; Patrick Purcell, miner, Heckscherville; Fred Osman, miner, Newtown.

The following persons were recommended for certificates:

##### Mine Foremen

Samuel J. Evans, Minersville; Charles Shoffstall, Minersville; Thomas Glennon, Minersville.

##### Assistant Mine Foremen

Hugh McGovern, Branchdale; William Burchill, Frackville; John Dando, Minersville.



## Twentieth District

DAUPHIN AND SCHUYLKILL COUNTIES

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Lykens, Pa., March 14, 1907.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Twentieth Anthracite District, for the year ending December 31, 1906.

Respectfully submitted,

CHARLES J. PRICE,  
Inspector.

## SUMMARY OF STATISTICS

Number of collieries,.....	6
Number of mines,.....	21
Number of mines in operation,.....	21
Number of tons of coal shipped to market,.....	1,826,728
Number of tons used at mines for steam and heat.....	345,170
Number of tons sold to local trade and used by employes,	32,294
Number of tons produced,.....	2,204,192
Number of persons employed inside of mines,.....	3,927
Number of persons employed outside,.....	1,964
Number of fatal accidents inside of mines,.....	13
Number of fatal accidents outside,.....	3
Number of non-fatal accidents inside of mines,.....	51
Number of non-fatal accidents outside,.....	9
Number of tons of coal produced per fatal accident in- side, .....	169,553
Number of persons employed per fatal accident inside,..	302
Number of persons employed per fatal accident outside,....	655
Number of persons employed per non-fatal accident in- side, .....	77
Number of persons employed per non-fatal accident out- side, .....	218
Number of wives made widows,.....	12
Number of children orphaned,.....	42
Number of steam locomotives used inside of mines,.....	1
Number of steam locomotives used outside,.....	17
Number of electric motors used inside,.....	11
Number of fans in use,.....	20
Number of gaseous mines in operation,.....	19
Number of non-gaseous mines in operation,.....	2

## TABLE A

## PRODUCTION OF COAL

Names of Operators	Tons
Lykens Valley Coal Company,.....	376,654
Summit Branch Mining Company,.....	279,349
Philadelphia and Reading Coal and Iron Company,.....	1,304,361
Lehigh Valley Coal Company,.....	179,963
Snyder and Company,.....	63,865
Total, .....	<u>2,204,192</u>

## Production by Counties

Dauphin, .....	656,003
Schuylkill, .....	<u>1,548,189</u>
Total, .....	<u>2,204,192</u>

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employees inside	Number of employees outside	Total number of employees	Number of employees inside per fatal accident	Number of employees outside per fatal accident	Number of employees inside per non-fatal accident	Number of employees outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lykens Valley Coal Co., .....	2	.....	2	12	4	17	188,327	28,973	825	376	1,201	412	.....	63	94
Summit Branch Mining Co., .....	1	1	2	14	2	16	279,345	19,953	597	435	1,032	597	435	43	218
Philadelphia and Reading Coal and Iron Co., .....	8	1	9	12	1	13	163,045	108,696	2,135	942	3,077	267	942	178	942
Lehigh Valley Coal Co., .....	2	1	3	12	2	14	89,881	14,997	370	165	535	185	165	31	53
Miscellaneous companies, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	46	.....	.....	.....	.....
Totals and averages for district, .....	13	2	16	51	9	60	169,553	43,219	3,927	1,964	5,891	302	655	77	218

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents Inside														
Falls of coal, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	7.69
Falls of slate, .....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	15.39
Falls of roof, .....	1	.....	1	.....	.....	.....	1	.....	.....	1	.....	.....	3	23.07
Mine cars, .....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	15.39
Premature blasts, .....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	15.39
Falling down manway, etc., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	7.69
Crushed at batteries, .....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	7.69
Miscellaneous, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	7.69
Totals, .....	2	3	1	.....	.....	1	2	.....	1	3	.....	.....	13	100.00
Causes of Accidents Outside														
Cars, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1	3	100.00
Totals, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1	3	100.00
Grand totals inside and outside, .....	2	3	1	.....	1	1	2	.....	1	3	1	1	16	

TABLE D.—Classification of Non-fatal Accidents Inside and Outside of Mines

	Months												Totals	Percentages
	January	February	March	April	May	June	July	August	September	October	November	December		
Causes of Accidents inside														
Falls of coal, .....	2	1	1			1		1	1		1	1	9	17.64
Falls of slate, .....	2		1			1	2	1		1		1	12	23.53
Falls of roof, .....					1				1				3	3.92
Mine cars, .....	1	2	1						1	1	2		8	15.69
Explosions of gas and dust, .....	1		2					2				1	6	11.77
Explosions of powder and dynamite, .....	1									1			2	3.92
Premature blasts, .....												1	1	1.96
Falling down manway, .....			1			1	2			1	1		6	11.77
Miscellaneous, .....	2				1	1	1			1			5	9.80
Totals, .....	9	3	9		2	3	5	2	5	5	4	4	51	100.00
Causes of Accidents Outside														
Cars, .....						1	1		2				4	44.45
Miscellaneous, .....		1	1					1				2	5	55.55
Totals, .....		1	1			1	1	1	2			2	9	100.00
Grand totals inside and outside, .....	9	4	10		2	4	6	5	7	5	4	6	60	



TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners, .....	2	3	1	.....	.....	1	2	.....	1	3	.....	.....	12
Drivers and runners, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Totals, .....	2	3	1	.....	.....	1	2	.....	1	3	.....	.....	13
Outside													
All other employees, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1	3
Totals, .....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	3
Grand totals inside and outside, .....	2	3	1	.....	1	1	2	.....	1	3	1	1	16

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants, . . . . .	1												1
Miners, . . . . .	1	1	5		1	2	4	2	3	2	2	3	30
Miners' laborers, . . . . .	1	2	3		1	1	1		1	1	1		10
Drivers and runners, . . . . .									1	1	1		6
Company men, . . . . .			1										1
All other employees, . . . . .									1	1		1	3
Totals, . . . . .	9	3	9		2	3	5	2	5	5	4	4	51
Outside													
Blacksmiths and carpenters, . . . . .			1										1
Engineers and firemen, . . . . .												1	1
All other employees, . . . . .		1				1	1	1	2			1	7
Totals, . . . . .		1	1			1	1	1	2			2	9
Grand totals inside and outside, . . . .	9	4	10		2	4	6	3	7	5	4	6	60

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	3	...	...	1	1	1	...	...	3	...	1	11
Welsh,	1	...	...	...	...	...	1	...	...	...	...	...	1
Polish,	...	...	1	...	...	...	...	...	...	...	1	...	1
Slavonian,	...	...	...	...	...	...	...	...	...	...	...	...	1
Austrian,	...	...	...	...	...	...	...	...	1	...	...	...	1
Totals,	12	3	1	...	1	1	12	...	1	3	1	1	16

**TABLE H.—Nationality of Persons Injured Inside and Outside of Mines**

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American, .....	5	2	5	.....	.....	2	6	3	5	5	1	4	39
English, .....	.....	1	1	.....	1	.....	.....	.....	2	.....	.....	1	6
Irish, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
German, .....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1	3
Polish, .....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Hungarian, .....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Italian, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Slavonian, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Lithuanian, .....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Totals, .....	9	4	10	.....	2	4	6	3	7	5	4	6	60



TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lykens Valley Coal Co. Short Mountain, .....	Dauphin, .....	R. A. Quin, .....	Wilkes-Barre, .....	Hood McKay, .....	Lykens, .....	Pennsylvania
Short Mountain washery, .....						
Summit Branch Mining Co. Williamstown, .....	Dauphin, .....	R. A. Quin, .....	Wilkes-Barre, .....	Hood McKay, .....	Lykens, .....	Pennsylvania
Egg Lick washery, .....						
Philadelphia and Reading Coal and Iron Co. Brookside, .....	Schuylkill, .....	W. J. Richards, ...	Pottsville, .....	Reese Tasker, .....	Pottsville, .....	Philadelphia and Reading
Lincoln, .....						
Good Spring, .....	Schuylkill, .....	S. D. Warriner, ...	Wilkes-Barre, .....	Frank E. Shedd, ..	Blackwood, .....	Lehigh Valley
Rausch Creek washery, .....						
Middle Creek washery, .....	Schuylkill, .....	Frank Warnki, ...	Scranton, .....	George Warnki, ...	Tremont, .....	Philadelphia and Reading
Lehigh Valley Coal Co. Blackwood, .....						
Snyder and Co. Lorberry washery, .....	Schuylkill, .....					

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder and dynamite used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market										Number of tons used at collieries for steam and heat		Number of tons sold to local trade and used by employes		Total production of coal in tons		Number of days worked		Number of employes		Number of fatal accidents		Number of non-fatal accidents		Number of kegs of powder used		Number of pounds of dynamite used		Number of horses and mules	
<b>Lykens Valley Coal Co.</b>																															
Short Mountain, .....	} Dauphin,.....	220,958	45,535	15,167	281,600	237	1,163	2	17	2,618	13,453	153																			
Short Mountain washery, .....		83,533	11,413	108	95,054	309	38	.....	.....	.....	.....	.....																			
Totals, .....		304,491	56,948	15,215	376,654	.....	1,201	2	17	2,618	13,453	153																			
<b>Summit Branch Mining Co.</b>																															
Williamstown, .....	} Dauphin,.....	143,222	117,575	5,352	266,149	311	1,015	2	10	2,487	68,222	87																			
Big Lick washery, .....		4,600	8,660	.....	13,260	104	17	.....	.....	.....	.....	.....																			
Totals, .....		147,822	126,175	5,352	279,349	.....	1,032	2	16	2,487	68,222	87																			
<b>Philadelphia and Reading Coal and Iron Co.</b>																															
Brookside, .....	} Schuylkill,.....	289,523	72,093	48	361,664	252	1,091	3	6	2,683	52,834	123																			
Lincoln, .....		413,414	29,164	6,288	448,866	246	1,183	5	7	9,843	14,353	121																			
Good Spring, .....		246,698	31,689	4,103	282,490	264	658	1	.....	4,045	50,655	59																			
Totals, .....	949,635	132,946	10,439	1,093,020	.....	2,932	9	13	16,571	117,842	303																				
<b>Washeries:</b>																															
Rausch Creek, .....	} Schuylkill,.....	113,198	3,530	.....	116,718	176	75	.....	.....	.....	.....	.....																			
Middle Creek, .....		86,655	7,660	308	94,623	182	70	.....	.....	.....	.....	.....																			
Totals, .....		199,853	11,180	308	211,341	.....	145	.....	.....	.....	.....	.....																			
Totals, .....	1,149,488	144,126	10,747	1,304,361	.....	3,077	9	13	16,571	117,842	303																				



Blackwood, .....	Lehigh Valley Coal Co. ....	163,322	15,721	920	179,963	237	535	3	14	3,024	48,235	14
Lorberry washery, .....	Snyder and Co. ....	61,605	2,200	60	68,865	192	45	.....	.....	.....	.....	.....
Grand totals, .....	.....	1,836,728	345,170	32,294	2,204,192	.....	5,891	16	60	24,700	247,752	557

TABLE 2. Recapitulation

Lykens Valley Coal Co., .....	Dauphin, .....	304,491	56,948	15,215	376,654	.....	1,201	2	17	2,618	13,453	153
Summit Branch Mining Co., .....	Dauphin, .....	147,822	126,176	5,352	279,349	.....	1,622	2	16	2,487	68,222	87
Philadelphia and Reading Coal and Iron Co., .....	{ Schuylkill, ....	1,149,488	144,126	10,747	1,304,361	.....	3,077	9	13	16,571	117,842	303
Lehigh Valley Coal Co., .....	.....	163,322	15,721	920	179,963	.....	53	3	14	3,024	48,235	14
Snyder and Co., .....	.....	61,605	2,200	60	68,865	.....	45	.....	.....	.....	.....	.....
Totals, .....	.....	1,836,728	345,170	32,294	2,204,192	.....	5,891	16	60	24,700	247,752	557

TABLE 2.—PART 2

Names of Operators	County	Number of Boilers				Locomotives			Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric					
Lykens Valley Coal Co., .....	Dauphin.....	8	510	39	3,592	4,102	4	.....	2	40	5,739	1,662	2	1
Summit Branch Mining Co., .....	Dauphin.....	60	2,100	61	8,200	10,300	5	.....	2	24	8,107	5,479	2	2
Philadelphia and Reading Co., .....	Dauphin.....	48	1,890	60	7,560	9,390	8	.....	4	60	16,270	9,512	2	2
Lehigh Valley Coal Co., .....	Schuylkill.....	.....	.....	5	1,500	1,500	1	.....	3	9	.....	.....	1	1
Snyder and Co., .....		.....	.....	4	400	400	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	116	4,500	169	21,192	25,692	18	.....	11	133	30,107	16,653	8	6

TABLE 3.—Number of each class of employees inside and outside of mines

Names of Operators and Col- lieries	County	Inside										Outside										Grand total inside and outside
		Inside										Outside										
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employees	Totals outside	
Lykens Valley Coal Co. Short Mountain, Short Mountain washery, Totals,	Dauphin,	1	4	7	265	97	93	20	18	265	115	825	1	1	26	48	68	.....	7	187	338	1,163
		1	4	7	265	97	93	20	18	265	115	825	1	1	26	55	68	.....	7	216	376	1,201
		2	4	5	183	44	33	4	20	57	245	597	1	2	17	90	64	.....	5	239	418	1,015
Summit Branch Mining Co. Williamstown, Big Lick washery, Totals,	Dauphin,	2	4	5	183	44	33	4	20	57	245	597	1	2	17	93	64	.....	5	253	435	1,032
		2	4	5	183	44	33	4	20	57	245	597	1	2	17	93	64	.....	5	253	435	1,032
		2	4	5	183	44	33	4	20	57	245	597	1	2	17	90	64	.....	5	239	418	1,015
Philadelphia and Reading Coal and Iron Co. Brookside, Lincoln, Good Spring,	Schuylkill,	7	4	7	176	108	42	15	4	132	388	784	.....	4	11	52	50	9	3	178	307	1,091
		7	4	7	208	188	77	12	.....	132	205	987	.....	2	11	46	37	15	3	132	246	1,183
		7	4	7	166	87	12	16	4	69	61	414	.....	3	9	28	45	11	3	146	244	658
Washeries: Rausch Creek, Middle Creek, Totals,	Schuylkill,	7	4	7	641	383	131	37	8	334	554	2,135	.....	9	31	126	132	35	9	455	797	1,932
		7	4	7	641	383	131	37	8	334	554	2,135	.....	9	31	126	132	35	9	455	797	1,932
		7	4	7	641	383	131	37	8	334	554	2,135	.....	11	37	138	146	35	11	564	942	3,077

TABLE 3.—Continued

Names of Operators and Collieries	County	Inside										Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employees	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	State pickers (boys)	State pickers (men)	Bookkeepers and clerks	All other employees	Total outside	
Lehigh Valley Coal Co. Blackwood, .....	Schuylkill, .....	3	.....	5	264	.....	9	4	.....	13	72	370	1	2	8	10	23	12	3	106	165	535
Snyder and Co. Lorberrry washery, .....	Schuylkill, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	2	7	3	.....	1	30	46	46
Grand totals, .....	.....	13	12	50	1,356	524	266	65	46	609	986	3,927	4	19	91	303	304	47	27	1,169	1,964	5,891

TABLE 3.—Recapitulation

Lykens Valley Coal Co., .....	Dauphin, .....	1	4	7	265	97	93	20	18	296	115	825	1	2	27	55	68	.....	7	916	276	1,201
Summit Branch Mining Co., .....	Dauphin, .....	2	4	5	183	44	33	4	20	37	246	697	1	1	7	63	64	.....	5	253	43	1,032
Philadelphia and Reading Coal and Iron Co. ....	Dauphin, .....	7	4	33	644	353	131	37	8	334	554	2,135	.....	11	37	138	146	55	11	564	942	3,077
Lehigh Valley Coal Co., .....	Schuylkill, .....	3	.....	5	264	.....	9	4	.....	13	72	370	1	2	8	10	23	12	3	106	165	535
Snyder and Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	2	7	3	.....	1	30	46	46
Totals, .....	.....	13	12	50	1,356	524	266	65	46	609	986	3,927	4	19	91	303	304	47	27	1,169	1,964	5,891

TABLE 3.—PART 2

Names of Operators and Collieries	County	Number of Days Worked in Breaker												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
Lykens Valley Coal Co.	Dauphin	25	23	26	.....	9	22	22	23	21	22	22	22	237
Short Mountain, .....	Dauphin	30	26	31	.....	16	30	30	33	29	27	30	29	311
Summit Branch Mining Co.														
Williamstown, .....														
Philadelphia and Reading Coal and Iron Co.	{ Schuylkill	24	22	26	.....	14	26	19	27	19	26	25	24	252
Brookside, .....		25	22	25	.....	17	26	18	25	19	21	24	24	246
Lincoln, .....		25	22	25	.....	17	26	18	25	19	21	24	24	246
Good Spring, .....		24	23	26	6	21	26	20	27	19	24	24	24	264
Lehigh Valley Coal Co.														
Blackwood, .....	Schuylkill	20	15	27	.....	13	25	22	24	20	22	24	21	237



TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Mine	County	Nature and Cause of Accident in Brief
Jan. 2	David Reese, .....	Welsh.....	Miner, .....	62 .....	.....	.....	.....	Short Mountain, ..	Dauphin.....	Instantly killed by fall of slate while robbing pillars.
18	Theodore Kirchoff, ..	American....	Miner, .....	43 .....	M. ....	4 .....	4 .....	Williamstown, ....	Dauphin.....	Instantly killed by stump pillar giving way with rush from above.
Feb. 5	Charles Shadle, .....	American....	Miner, .....	36 .....	M. ....	1 .....	3 .....	Brookside, .....	Schuylkill.....	While trying to pry down some loose slate a large piece fell on him and injured him so badly that he died one hour later.
13	Emanuel Hehn, .....	American....	Timberman, ..	55 .....	M. ....	1 .....	3 .....	Lincoln, .....	Schuylkill.....	Knee injured between mine cars. Complications set in later and he died May 29. Outside.
19	John F. Schneider, ..	American....	Miner, .....	47 .....	M. ....	1 .....	.....	Brookside, .....	Schuylkill.....	Instantly killed by premature blast. He had put touch paper to squib, when it instantly exploded, with the above result.
27	Edward Culbert, .....	American....	Miner, .....	40 .....	M. ....	1 .....	4 .....	Lincoln, .....	Schuylkill.....	Crushed between slate car and platform. He stood on the high side and tried to get on car and a slate car following crushed him to death.
March 28	Joseph Loricke, .....	Polish.....	Miner, .....	48 .....	M. ....	1 .....	5 .....	Short Mountain, ..	Dauphin.....	Instantly killed by fall of rock.
June 28	Edward McCoy, .....	American....	Driver, .....	25 .....	M. ....	1 .....	1 .....	Lincoln, .....	Schuylkill.....	Leg caught between loaded and empty mine cars and crushed so badly that he died from the shock the next morning.
July 12	Simon Evans, .....	Welsh.....	Miner, .....	42 .....	M. ....	1 .....	6 .....	Brookside, .....	Schuylkill.....	After failing in the attempt to pry down a piece of rock a shot was fired in the coal and while dressing shot the rock fell and killed him.
18	Amos Wolf, .....	American....	Miner, .....	39 .....	M. ....	1 .....	7 .....	Lincoln, .....	Schuylkill.....	Instantly killed by premature blast. Two holes had been lighted and he went back before second coal had gone off.
Sept. 4	James Brantrea, .....	Austrian....	Miner, .....	27 .....	S. ....	.....	.....	Blackwood, .....	Schuylkill.....	While starting coal in battery the rush caught him and broke his neck, killing him instantly.

Oct.	11	F. Dunkleberger, ....	American,....	Miner, .....	32	M.	1	4	Good Spring, .....	Schuykill,.....	While trying to start a coal battery the bar slipped and struck him on the head, fracturing his skull. He died in hospital October 15.
	15	G. W. Marks, .....	American,....	Miner, .....	37	M.	1	2	Blackwood, .....	Schuykill,.....	While trying to get out of the way of coal falling from the high side he slipped and fell down the breast and injured himself internally. Died the next morning.
	26	Edward B. Miller, ..	American,....	Miner, .....	29	M.	1	1	Lincoln, .....	Schuykill,.....	Instantly killed while going down breast by falling rock.
Nov.	3	John Cooper, .....	Slavonian,....	Laborer, ...	30	M.	1	1	Blackwood, .....	Schuykill,.....	Right leg severed by being run over by mine cars. He died from shock while on the way to the hospital. Outside.
Dec.	31	Henry Noel, .....	American,....	Laborer, ...	18	S.	.....	.....	Williamstown, ....	Dauphin, .....	While attempting to cross track in front of dirt chutes he was knocked down and injured so badly that he died while on the way home. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Mine	County	Nature and Cause of Accident in Brief
Jan.	3 Harry Grow, .....	American, ..	Laborer, ..	24	S.	Short Mountain, ..	Dauphin, .....	Back bruised and eye cut by fall of slate.
4 Condy Morrison, .....	Irish, .....	Irish, .....	Miner, .....	36	M.	Williamstown, ..	Dauphin, .....	Shoulder and back hurt by fall of slate.
6 James C. Eugsy, .....	American, ..	American, ..	Driver, .....	19	S.	Williamstown, ..	Dauphin, .....	Ribs fractured and lung injured by being caught between door frame and car.
6 James Powlaski, .....	Hungarian, ..	Hungarian, ..	Miner, .....	35	S.	Blackwood, .....	Schuylkill, ..	Burned by powder.
10 Frank Berry, .....	American, ..	American, ..	Fire boss, ..	44	M.	Williamstown, ..	Dauphin, .....	Ribs broken and kidney injured. Struck by flange of pulley coming down slope.
11 G. E. Davis, .....	American, ..	American, ..	Miner, .....	27	M.	Williamstown, ..	Dauphin, .....	Slightly burned by explosion of gas.
19 Chas. Newton, .....	American, ..	American, ..	Miner, .....	34	M.	Williamstown, ..	Dauphin, .....	Leg broken by fall of coal.
24 J. B. Heinbach, .....	German, .....	German, .....	Laborer, ..	47	M.	Lincoln, .....	Schuylkill, ..	Shoulder and back bruised by fall of coal.
31 A. Snivinsky, .....	Slavonian, ..	Slavonian, ..	Miner, .....	40	M.	Blackwood, .....	Schuylkill, ..	Shoulder dislocated by fall of coal.
5 S. Lord, .....	American, ..	American, ..	Driver, .....	23	S.	Brookside, .....	Schuylkill, ..	Squeezed between rock and car.
6 Chas. Keck, .....	American, ..	American, ..	Driver, .....	20	M.	Lincoln, .....	Schuylkill, ..	Hand mashed between bumpers of cars.
13 R. Mahon, .....	Irish, .....	Irish, .....	Miner, .....	39	M.	Brookside, .....	Schuylkill, ..	Rib broken and head bruised by fall of coal.
19 S. Mease, .....	American, ..	American, ..	Runner, .....	19	S.	Brookside, .....	Schuylkill, ..	Leg broken. Struck by cable reel. Out-side.
March	3 F. McCann, .....	Irish, .....	Starter, .....	25	S.	Blackwood, .....	Schuylkill, ..	Ankle bruised between bumpers of cars.
5 J. Lyshon, .....	Irish, .....	Irish, .....	Miner, .....	50	M.	Blackwood, .....	Schuylkill, ..	Head bruised by falling down manway.
12 J. Williams, .....	American, ..	American, ..	Miner, .....	34	M.	Short Mountain, ..	Dauphin, .....	Burned about face and hands by explosion of gas.
12 G. Ziguer, .....	American, ..	American, ..	Laborer, ..	20	S.	Short Mountain, ..	Dauphin, .....	Burned about face and hands by explosion of gas.
15 S. Radlick, .....	Polish, .....	Polish, .....	Miner, .....	40	M.	Short Mountain, ..	Dauphin, .....	Leg broken by fall of slate.
17 E. Barr, .....	American, ..	American, ..	Miner, .....	31	M.	Lincoln, .....	Schuylkill, ..	Leg broken by fall of coal.
23 W. J. Long, .....	American, ..	American, ..	Carpenter, ..	31	M.	Short Mountain, ..	Dauphin, .....	Leg broken by falling from fan. Out-side.
28 E. Kropp, .....	American, ..	American, ..	Miner, .....	23	S.	Brookside, .....	Schuylkill, ..	Leg broken and back cut by fall of slate.
28 F. Kramer, .....	Polish, .....	Polish, .....	Laborer, ..	20	S.	Short Mountain, ..	Dauphin, .....	Fracture of both hips by fall of slate.
28 F. Drabit, .....	Polish, .....	Polish, .....	Laborer, ..	20	S.	Short Mountain, ..	Dauphin, .....	Fracture of both hips by fall of slate.
May	21 G. Dishcent, .....	Hungarian, ..	Laborer, ..	44	M.	Short Mountain, ..	Dauphin, .....	Arm broken by flying debris.
19 D. Cavenaugh, .....	Irish, .....	Irish, .....	Miner, .....	35	S.	Short Mountain, ..	Dauphin, .....	Foot bruised by fall of rock.
June	19 C. Bowman, .....	American, ..	Laborer, ..	24	S.	Williamstown, ..	Dauphin, .....	Leg broken by fall of coal.

June	21	A. Belunis,	Lithuanian,	Miner,	35	M.	Blackwood,	Schuykill,	Back and body bruised by fall of slate.
	26	C. D. Herb,	American,	Runner,	17	S.	Short Mountain,	Dauphin,	One hand cut off and the other mangled by being run over by mine cars. Outside.
	28	C. Clouser,	German,	Miner,	30	M.	Blackwood,	Schuykill,	Head bruised and cut by falling down manway.
July	16	P. Koppenhaver,	American,	Miner,	40	M.	Williamstown,	Dauphin,	Leg bruised by falling down manway.
	20	Theo. Kirchoff,	American,	Laborer,	19	M.	Williamstown,	Dauphin,	Wrist broken by falling props.
	20	E. Keuhn,	American,	Miner,	36	M.	Williamstown,	Dauphin,	Left foot and collar bone injured by falling down manway.
	27	J. C. Reigle,	American,	Miner,	27	M.	Short Mountain,	Dauphin,	Body cut and bruised by fall of slate.
	27	D. Kolva,	American,	Miner,	25	M.	Short Mountain,	Dauphin,	Foot fractured by fall of slate.
	30	R. Powell,	American,	Doorboy,	18	S.	Williamstown,	Dauphin,	Arm crushed by falling under locomotive. Outside.
Aug.	10	J. Walters,	American,	Laborer,	35	S.	Blackwood,	Schuykill,	Skull fractured by fall from car. Outside.
	16	J. Tobias,	American,	Miner,	39	M.	Lincoln,	Schuykill,	Rib fractured by fall of slate.
	21	H. Sakada,	American,	Miner,	54	M.	Williamstown,	Dauphin,	Spined about hips by rush of coal.
Sept.	7	G. Straub,	American,	Laborer,	20	S.	Williamstown,	Dauphin,	Leg badly cut by being run over by cars. Outside.
	10	W. Zimmerman,	American,	Miner,	42	M.	Lincoln,	Schuykill,	Slightly burned about face and hands by explosion of gas.
	10	J. Lefter,	American,	Miner,	24	M.	Lincoln,	Schuykill,	Slightly burned about face and hands by explosion of gas.
	11	C. Stecker,	American,	Driver,	17	S.	Short Mountain,	Dauphin,	Leg torn. Run over by mine cars. Outside.
	18	P. Gilman,	Irish,	Rockman,	36	M.	Williamstown,	Dauphin,	Leg broken by fall of rock.
	19	J. Ryan,	Irish,	Miner,	55	M.	Short Mountain,	Dauphin,	Back hurt by fall of coal.
	22	M. Zimmerman,	American,	Driver,	18	S.	Lincoln,	Schuykill,	Collar bone broken. Caught between car and rib.
Oct.	13	J. McCormick,	American,	Driver,	19	S.	Short Mountain,	Dauphin,	Arm broken by falling down manway.
	15	J. G. Hand,	American,	Miner,	37	M.	Brookside,	Schuykill,	Arm cut and bruised by fall of slate.
	18	E. Dewalt,	American,	Laborer,	22	M.	Williamstown,	Dauphin,	Face badly cut by flying rock.
	24	B. F. Hollar,	American,	Miner,	45	M.	Williamstown,	Dauphin,	Slightly burned by powder.
	27	C. Showers,	American,	Repairman,	26	M.	Brookside,	Schuykill,	Squeezed between mine car and prop.
Nov.	3	G. July,	Slavonian,	Laborer,	20	S.	Blackwood,	Schuykill,	Squeezed between prop and mine car.
	26	A. Aquilun,	Italian,	Miner,	26	M.	Blackwood,	Schuykill,	Skull fractured by falling down manway.
	27	J. Sutter,	German,	Driver,	24	M.	Blackwood,	Schuykill,	Squeezed between prop and mine car.
	30	D. Shanper,	American,	Miner,	35	M.	Short Mountain,	Dauphin,	Cut on head and back by flying pieces of coal.
Dec.	3	J. Jones,	American,	Loader,	33	S.	Blackwood,	Schuykill,	Head cut by pieces of coal from shot.
	8	H. Watkins,	American,	Miner,	38	M.	Williamstown,	Dauphin,	Burned about face and hands by explosion of gas.
	13	A. Esterline,	American,	Loader,	22	M.	Short Mountain,	Dauphin,	Arm broken by fall from car. Outside.
	21	W. Barr,	German,	Miner,	38	M.	Blackwood,	Schuykill,	Both feet hurt by fall of slate.
	21	J. H. Gilbert,	American,	Miner,	38	M.	Blackwood,	Schuykill,	Contusion of hips by fall of coal.
	24	W. F. Hinson,	English,	Engineer,	35	S.	Blackwood,	Schuykill,	Rib fractured by falling from locomotive. Outside.

## FATAL ACCIDENTS

## Falls of Coal, Slate and Roof

January 2, Short Mountain Colliery, David Reese, Welsh, miner, was instantly killed by a fall of slate in No. 6 Counter, No. 3 level west, while robbing pillars. Not having enough coal to finish loading the car, he went up along the edge of the pillar to start some more coal down, when a large piece of top slate became loose and fell on him.

January 18, Williamstown Colliery, Theodore Kirchoff, American, miner, was crushed to death in No. 1 shaft, No. 9 vein, west. He was engaged in removing the coal from the stump above the gangway, the vein pitching at an angle of about 68 degrees, when a rush of rock and slate in an old breast above struck the stump pillar and crushed it, killing Kirchoff instantly.

February 5, Brookside Colliery, Charles Shadle, American, miner, employed in No. 1 slope, No. 4 vein, west, was instantly killed by a fall of slate. While dressing down loose slate above the vein, a large piece fell on him.

March 28, Short Mountain Colliery, Joseph Lorick, Polish, miner, employed as timberman in No. 2 Counter, No. 4 slope, was instantly killed by a fall of rock on the gangway, and his two laborers were seriously injured. Assistant Mine Foreman Reigel had just sounded the top and believed it safe, when, without any warning, it fell, with the above result.

July 12, Brookside Colliery, Simon Evans, Welsh, miner, employed in No. 1 slope, No. 4 vein, west, was crushed so badly by a fall of slate that he died the same night. He had tried to pry a piece of slate down, but failed. He then fixed a shot directly under it, and while dressing the shot the top slate fell and crushed him.

October 15, Blackwood Colliery, George W. Marks, American, miner, employed in breast No. 49, East Holmes vein, had started a heading in the pillar, when some coal fell from the high side. In trying to escape he slipped and fell down the manway and injured himself internally. He died the next morning.

October 25, Lincoln Colliery, Edward B. Miller, American, miner, employed in No. 1 slope, third lift, fired three holes in face of breast, and after dressing the shots was going down his breast on west side and took hold of a prop, which had become loosened by pieces of coal from the shot. His weight dislodged the prop and a large piece of rock fell from the roof and crushed him instantly.

## Premature Blasts

February 19, Brookside Colliery, John F. Schneider, American, miner, employed in No. 5 slope, fifth lift, was instantly killed by a premature blast. He had drawn the needle from the hole, inserted the squib, which he had taken from a new box, put touch to squib, and started for the heading only 12 feet away, when the shot exploded, killing him before he had reached a place of safety.

July 18, Lincoln Colliery, Amos Wolf, American, miner, employed in No. 1 slope, sixth lift, was instantly killed by a blast. He and his companion had lighted two holes and retreated to a place of



safety. One of the shots was slow in exploding, and Wolf thought it was extinguished and went up to see, but just as he reached the face of the breast the shot exploded.

### Crushed at Batteries

September 4, Blackwood Colliery, James Brantrea, Austrian, miner, employed in Wood's tunnel, had been sent to start batteries, the regular starter not being at work. The battery being blocked, he was in the act of putting a shot of dynamite in the coal to start it, when it came with a rush, doubling him backward and breaking his neck.

October 11, Good Spring Colliery, Frank Dunkleberger, American, miner, employed as a starter at this colliery, was starting coal in a battery when the bar slipped and struck him on the head, fracturing his skull. He died at the hospital, October 15.

### Mine Cars

February 13, Lincoln Colliery, Emanuel Hohn, American, timberman, employed outside, slightly injured his knee while in the act of coupling two empty cars. The injury was considered trifling, as he worked all that day, but complications set in, which caused his death three months later, May 20.

February 27, Lincoln Colliery, Edward Culbert, American, miner, employed in No. 1 slope, fifth lift, had finished his day's work, and was standing on the high side of the gangway to allow a trip to pass him. He tried to board what he supposed was the last car, when a slate car following caught him between the platform and the car. He was injured so badly that he died the same night.

June 28, Lincoln Colliery, Edward McCoy, American, driver, had his leg crushed between a loaded car and a slate buggy, on the turn-out in No. 1 slope, No. 5 lift. After shifting the slate car from loaded track to an empty one, he neglected to fix latches for the loaded track, and on pulling his trip out the cars ran down the empty track, and his leg was caught and crushed so badly that he died from the shock the same night.

November 3, Blackwood Colliery, John Cooper, Slavonian, laborer, employed in loading culm at Dundass dirt bank, had finished his day's work and got on a loaded trip of cars to ride to breaker. He fell off en-route and was run over and injured so badly that he died on the way to the hospital.

December 31, Williamstown Colliery, Henry Noel, American, laborer, employed at the breaker loading rice coal for boilers, was assisting a friend to run dumpers under the breaker, and while crossing the track was knocked down and crushed by cars. He died on the way home.

On June 19 an accident occurred at Williamstown Colliery that was not considered a mine accident, as the victim was not at the time employed by the company. Peter Malloy, 24 years of age, was walking down the separator plane from the colliery, and was struck by a loaded car that was coming up, and injured so badly that he died the same night, without regaining sufficient consciousness to tell just how it happened. It is said that the young man had been

in this country only three months, having left his parents in Ireland, and was homesick, and probably he was so deeply engrossed in thought that he failed to see his danger, as it was daylight and the sides of the track were clear.

## CONDITION OF COLLIERIES

### LYKENS VALLEY COAL COMPANY

Short Mountain Colliery.—The general condition of colliery is good. The ventilation in some parts of the mine is not what it should be, as it is almost impossible to carry the air current to the face of the workings through the old workings, as the overlying vein, having been worked out, allows the air to escape through fissures of the rock. The sanitary condition and drainage are good.

### SUMMIT BRANCH MINING COMPANY

Williamstown Colliery.—The sanitary condition is good, and also the ventilation, but the drainage in some parts of the mine is neglected and not as good as it should be.

### PHILADELPHIA AND READING COAL AND IRON COMPANY

Brookside Colliery.—The condition of this colliery is good. In No. 5 slope they have considerable trouble to maintain the ventilation up to the standard, owing to the bottom heaving and breaking the batteries, which allows the air to escape. Drainage and sanitary conditions are good.

Lincoln Colliery.—Ventilation is good. During the year the fans were exchanged from an exhaust to a force, thus allowing the air to pass out to the surface near the face of the workings, and reducing the friction to a minimum. Some of the gangways are two miles long, so this is certainly a great improvement. Sanitary conditions and drainage are good.

Good Spring Colliery.—Ventilation and drainage are excellent. During the year only one accident was reported from this colliery.

### LEHIGH VALLEY COAL COMPANY

Blackwood Colliery.—The condition of this colliery is good with regard to ventilation and drainage, but mining is very difficult, as the veins, which are very irregular in some places, are inverted and pitch 75 degrees. This requires exceptionally careful and good workmen who are accustomed to the heavy pitches.

## IMPROVEMENTS

### LYKENS VALLEY COAL COMPANY

Short Mountain Colliery.—To replace the buildings destroyed by fire in February, 1906, there has been erected a new machine, carpenter and blacksmith shop, fully equipped, under one roof, 66 feet by 94 feet, frame; also a new concrete block house, 27 feet by 51 feet, in which to store locomotives.

### Inside Improvements

A pump house on No. 3 level, west, 14x12x56, has been completed, and two compound Jeanesville pumps are being installed.

#### SUMMIT BRANCH MINING COMPANY

Williamstown Colliery.—A new engine house has been built, 27 feet by 43 feet, on the side of the hill, in which a pair of engines 18 inches by 36 inches have been placed, to be used to hoist cars up No. 3 slope. The engines now being used inside will be removed.

A concrete block building, 21 feet by 40 feet, has been erected, and is used as a power house, in which has been installed two direct acting electric engines, Harrisburg Engine Company's make, coupled to General Electric Company's direct acting generators, with a speed of 280 revolutions per minute, 400 amperes without load, 275 amperes with load, and 300 volts. This plant replaces the locomotives used to haul the coal from the Bear Valley side through the tunnel, where the disaster occurred a few years ago in which ten men lost their lives.

No. 2 shaft counter, a tunnel 8x10, 841 feet long, from shaft turn-out, cutting the No. 8 and No. 9 veins on North dip.

#### LEHIGH VALLEY COAL COMPANY

Blackwood Colliery.—A balance plane 550 feet in length was built at Dundass tunnel.

An addition of one battery of 300 horse-power B. and W. boilers was put on to the boiler plant.

### Blackwood Colliery

Blackwood Tunnel.—A 7x10 rock tunnel was driven from the Holmes to the Mammoth vein, a distance of 45 feet.

Woods Tunnel.—A 7x10 rock tunnel was driven from the Holmes to the Mammoth vein, a distance of 47 feet. Work is now being done in extending this tunnel to the Skidmore vein.

Dundass Tunnel.—The main tunnel, the East Skidmore gangway and the West Skidmore, were cleaned up and retimbered to the face.

#### PHILADELPHIA AND READING COAL AND IRON COMPANY

East Brookside Colliery.—A tunnel has been driven from the bottom of No. 5 vein slope to the coal and water shaft, a distance of 1,180 feet.

A backswitch tunnel has been driven at bottom of shaft, 100 feet long.

A car hoist tunnel has been driven at bottom of shaft, 72 feet long.

An empty track tunnel has been driven leading from top of car hoist tunnel to main tunnel to shaft, 372 feet long.

A sump tunnel has been driven at bottom of shaft, 562 feet long.

A pair of 40x60 inch engines has been erected for hoisting water at shaft.



The coal and water shaft is completed at a depth of 1,838 feet, and will be used as a permanent hoistway as soon as the head frame is erected.

On the East No. 5 vein, top No. 2 plane, fifth lift, a hole is being driven to connect with No. 4 Basin slope below fifth lift. This hole will tap the water which is in the No. 4 Basin slope below fifth lift, West Brookside. This hole is now up 435 feet, and must be driven 250 feet before the connection is made.

Good Spring Colliery.—One pair hoisting engines, cylinder 24-inch, diameter 60-inch strokes, was erected at Tender slope.

An 8-inch steam line, 595 feet long from boiler house to breaker, has been completed.

A Jeanesville steam pump has been erected to supply colliery with fresh water.

An electric light plant has been installed and a lumber shed erected.

A tunnel on second lift, west side, No. 1 slope, from Skidmore to Buck Mountain, 59 yards long, completed.

A tunnel on first lift, east side, No. 3 slope, from Skidmore to Buck Mountain, 42 yards long, completed.

An air tunnel over water level tunnel at No. 3 slope, 43 2-3 yards long, completed, and an 18-foot fan placed thereon.

The water from the Eckert gangway has been tapped by breast No. 55, East Bottom Bench gangway, second lift, No. 3 slope.

Lincoln Colliery.—A tunnel, fourth lift, east side, No. 2 slope, still being driven, from No. 4 vein toward No. 5 vein, has reached a distance of 94 2-3 yards. A trial slope on No. 2 vein, west of colliery, has reached a depth of 183 1-3 yards, and is still being driven. A plane 108 yards long, from sixth lift, No. 1 slope, to fifth lift on No. 2 vein, has been completed.

An electric car hoist has been installed at breaker; a lumber shed has been erected, and also a new supply house.

## MINE FIRES

### PHILADELPHIA AND READING COAL AND IRON COMPANY

Good Spring Colliery.—The West Mammoth gangways at No. 3 slope, second lift, having been driven to the pillar line between No. 1 and No. 3 slopes, a distance of about 1,200 feet, the robbing of the pillars began. This is done by driving a manway in the pillar between the breasts. When driven up the desired distance holes are drilled in the pillar, filled with dynamite, and fired by an electric battery from the gangway. Seventeen breasts had been worked from this gangway on a pitch of 42 degrees, and the pillar between Nos. 16 and 17 breasts partly removed.

On July 11, 1905, the pillar manway between Nos. 15 and 16 breasts having been driven up 156 feet, the pillar was fired as described above. Coal was loaded from Nos. 15½ and 16 chutes until black damp was discovered coming out of the main return.

On July 19 the driver who was shifting some mine wagons on west side of slope was overcome by gas, which had accumulated there by leakings from the main return. He was rescued with difficulty by the fire boss, but the mule was suffocated.

On the morning of the 20th, the officials of the company, having been notified of the above occurrence, made a thorough examination. On the first lift they were unable to proceed any further than the main door on the west side of the slope, and found a considerable amount of damp passing in the return. They then went down to the second lift into the West Mammoth gangway and found fire burning in the No. 15 chute. Preparations were made at once to fight the fire. Two lines of 2-inch gas pipe were laid in the gangway and four streams of water were played upon the fire at different points. During this time coal was loaded into mine cars from chutes 15½ and 16½ as fast as possible. This was continued until July 22, when it was found that the fire was spreading and running up the pillar between Nos. 16 and 17 chutes. After a consultation of the officials of the company it was decided to abandon this method, and to try to smother the fire.

At 4 P. M. on the 22d of July stoppings were placed in the gangways and main return on the first and second lifts, and were completed by the 24th. The crop-falls on the surface, of which there was a large number, were completely sealed by clay and ground taken from the sides of the same. Frequent examinations of these stoppings and crop-falls showed no signs of leakage.

On January 19, 1906, the stoppings on main return were opened at airhole and the fan permitted to draw the damp from the western workings. On January 20, the foreman and his man were able to get into chute No. 16, where the gangway was closed by the burning of a set of timber. This was cleaned by the 21st, and the face of the gangway was reached. A thorough examination of the chutes and breasts disclosed no trace of any fire or damp, and the mining of coal was resumed.

The fire is supposed to have been caused by some of the dynamite failing to explode, and, burning in the holes, set the coal on fire.

#### LYKENS VALLEY COAL COMPANY

The above company suffered severely by fire this year.

On the morning of February 25 fire broke out in the large building used as machine, carpenter and blacksmith shops and sawmill, burning it completely to the ground, and entailing a loss of \$10,000.

On the morning of April 19 the locomotive house, in which were stored three locomotives, took fire and was almost completely destroyed. One of the locomotives was ruined beyond repair and the other two badly damaged.

The origin of these fires has never been discovered.

#### Mine Foremen's Examinations

The annual examination of applicants for certificates of qualification for mine foremen and assistant mine foremen was held in the Court House at Pottsville, April 24 and 25.

The Board was composed of the following members: Charles J. Price, Inspector, Lykens; Hood McKay, Superintendent, Lykens; John W. Kniley, Miner, Lykens; William James, Miner, Williams-town.



The following persons were recommended for certificates:

**Mine Foremen**

William Jones, Joliet; David Watkeys, Williamstown; George W. Schroe, Tower City; George H. Hunter, Wiconisco.

**Assistant Mine Foremen**

John Bond, Williamstown; John A. Hoke, Blackwood; Wilson C. Bressler, Blackwood; Frank Steinmetz, Blackwood; Lincoln O. English, Donaldson; Oscar A. Helwig, Donaldson; Charles Allen, Williamstown; Charles E. Parker, Williamstown; John F. Hand, Tremont.

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